EZN Series

Outdoor IR Bullet IP Camera

User's Manual

EverFocus®

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March, 2013

About this document

All the safety and operating instructions should be read and followed before the unit is operated. This manual should be retained for future reference. The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

Regulatory Notices

FCC Notice "Declaration of Conformity Information"

This equipment has been tested and found to comply with the limits for a Class
A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications made to this equipment, not expressly approved by EverFocus or parties authorized by EverFocus could void the user's authority to operate the equipment.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

EverFocus Electronics Corp.
12F, No. 79, Sec. 1, Shin-Tai Wu Rd., Hsi-Chi,
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EZN Series cameras comply with CE and FCC.

Precautions

1. **Do not install the camera near electric or magnetic fields.**
   Install the camera away from TV/radio transmitters, magnets, electric motors, transformers and audio speakers since the electromagnetic fields generated from these devices may distort the video image or otherwise interfere with camera operation.
2. **Never disassemble the camera beyond the recommendations in this manual nor introduce materials other than those recommended herein.**
   Improper disassembly or introduction of corrosive materials may result in equipment failure or other damage.
3. **Try to avoid facing the camera toward the sun.**
   In some circumstances, direct sunlight may cause permanent damage to the sensor and/or internal circuits, as well as creating unbalanced illumination beyond the capability of the camera to compensate.
4. **Keep the power cord away from water and other liquids and never touch the power cord with wet hands.**
   Touching a wet power cord with your hands or touching the power cord with wet hands may result in electric shock.
5. **Never install the camera in areas exposed to oil, gas or solvents.**
   Oil, gas or solvents may result in equipment failure, electric shock or, in extreme cases, fire.
6. **Cleaning**
   For cameras with interchangeable lenses, do not touch the surface of the sensor directly with the hands. Use lens tissue or a cotton tipped applicator and ethanol to clean the sensor and the camera lens. Use a damp soft cloth to remove any dirt from the camera body. Please do not use complex solvents, corrosive or abrasive agents for cleaning of any part of the camera.
7. **Do not operate the camera beyond the specified temperature, humidity or power source ratings.**
   Use the camera at temperatures within -40°C ~ 55°C / -40°F ~ 131°F (12 VDC) or -20°C ~ 55°C / -4°F ~ 131°F (PoE); this device is not rated as submersible. The input power source is 12 VDC / PoE. Be sure to connect the proper + / - polarity and voltage, as incorrect polarity or too high a voltage will likely cause the camera to fail, and such damage is not covered by the warranty. The use of properly fused or Class 2 power limited type supplies is highly recommended.
8. **Mounting**
   Use care in selecting a solid mounting surface which will support the weight of the camera plus any wind, snow, ice or other loading, and securely attach the camera to the mounting surface using screws and anchors which will properly support the camera. If necessary (e.g. when mounting to drop ceilings) use a safety wire to provide additional support for the camera.

TABLE OF CONTENTS

1. Introduction 1

2. Features 2

3. Overview 3

4. Installation 4

4.1 Packing List 4

4.2 Cables 4

4.3 Basic Installation 5

4.3.1 Mounting and Wiring 5

4.3.2 Inserting a Micro SD Card 7

4.3.3 Adjusting Camera Focus / Zoom 8

5. Accessing the User Interface 9

5.1 Checking the Dynamic IP Address 9

5.2 Settings for Microsoft Internet Explorer 11

5.3 Connecting the Camera to the Network 13

5.4 Live View Window 15

6. Playback 19

6.1 Playback Window 19

6.2 Setting Up the Playback Function 21

6.2.1 Preparing the Micro SD Card 21

6.2.2 Testing the Playback Function 22

6.3 Playing Back Using ARV Viewer 23

7. Settings 24

7.1 System Info 24

7.1.1 Information 24

7.1.2 Log 25

7.2 User Config 26

7.2.1 Live View Config 26

7.2.2 Recording / Snapshot 27

7.2.3 Language 28

7.3 Network 29
7.3.1 Network 29
7.3.2 DDNS 31
7.3.3 SMTP / FTP 33
7.3.4 HTTPS 35
7.3.5 SNMP 38
7.3.6 Network Alarm 38
7.4 Video 39
7.4.1 Multi Streaming 39
7.4.2 Camera 41
7.4.3 Advanced 47
7.4.4 ROI (Region of Interest) 60
7.4.5 Privacy Mask 61
7.4.6 Schedule 62
7.5 Audio 63
7.6 User 64
7.6.1 User Information 64
7.6.2 IP Address Filter 66
7.7 Event 67
7.7.1 Event Settings 67
7.7.2 Motion Detection 70
7.7.3 Tamper Detection 71
7.7.4 Alarm I/O 71
7.7.5 Schedule 72
7.8 System 73
7.8.1 Date/Time 73
7.8.2 Daylight Saving 74
7.8.3 SD Card 74
7.8.4 Maintenance 75
8. Upgrading Firmware Using IP Utility 77
9. Specifications 79

1. Introduction

The EZN series is an outdoor bullet camera delivering image quality of up to 3-megapixel. The camera supports both H.264 and MJPEG compression formats. The IP66-rated and vandal proof housing make it suitable for outdoor use. The IR LEDs are also implemented for infrared illumination in night vision applications.

The EZN series features the Wide Dynamic Range (WDR) function, which can provide clear images even under back light circumstances where intensity of illumination can vary excessively. A built-in micro SDHC card slot and Power over Ethernet (IEEE802.3af) features are also provided. You can power the camera over the network or by connecting the camera to a 12 VDC power supply. Since the EZN series conforms to ONVIF / PSIA for compatibility with other network video devices, it interoperates with a wide variety of hardware and software systems. You can also use EverFocus' Mobile Applications to remotely view the live views of the cameras through your handheld devices; or use EverFocus' CMS to remotely manage multiple IP devices connected on the LAN or WAN.

The EZN Series Models

Model Name	Megapixel	WDR
EZN3160	1.3 MP	Yes
EZN3260	2 MP	Yes
EZN3340	3 MP	No

System Requirement

Before installing, please check that your computer meets this system requirement.

- Operating System: Microsoft Windows XP / Vista (32-bit) / 7 (32-bit)
- Microsoft Internet Explorer 7 or above

Note: For using the Internet Explorer, some settings are required. Please refer to *5.2 Settings for Microsoft Internet Explorer.*

2. Features

- 1/3” Panasonic CMOS sensor (for EZN3160 / 3260)
  1/2.8” Sony CMOS sensor (for EZN3340)
- Triple streams (stream 1 / 2 / 3 from H.264 or MJPEG)
- Up to 30 fps at 1920 × 1080
  Supports 15 fps at 2048 x 1536 (only for EZN3340)
- Built-in micro SD / SDHC card slot
- Removable IR-cut filter for Day / Night function
- 3-axis mechanism (pan / tilt / rotate)
- One alarm input and output
- Two-way audio
- TV-out
- Wide Dynamic Range (for EZN3160 / 3260)
- Digital Slow Shutter (DSS)
- 2D / 3D Dynamic Noise Reduction (DNR)
- Motion Detection
- 10x Digital Zoom
- Privacy Mask
- 12 VDC / PoE
- IP66 weather resistant
- Multi-languages on Web interface
- ONVIF / PSIA compliant
- Supports EverFocus’ CMS and Mobile Applications

3. Overview

No.	Name	Description
1	**Test Output**	Connects to a handheld test monitor for adjusting camera focus and zoom.
2	**Focus / Zoom Control**	Press this control to the left or right to adjust camera focus. To zoom in / out the camera view, press this control up or down.
3	**Reset Button**	Resets all configurations to the factory default settings.
4	**Lens**	Varifocal lens.
5	**Micro SD / SDHC Slot**	For inserting a micro SD / SDHC card.
6	**IR LEDs**	44 IR LEDs for infrared illumination in night vision applications.
7	**Light Sensor**	Detects lights.
8	**Camera Cover**	Remove the cover for adjusting camera focus and zoom / inserting a micro SD card or connecting to a handheld test monitor.
9	**Sunshield**	Protect the camera from the direct rays of the sun.

4. Installation

4.1 Packing List

Please check that there is no missing item in the package before installing.

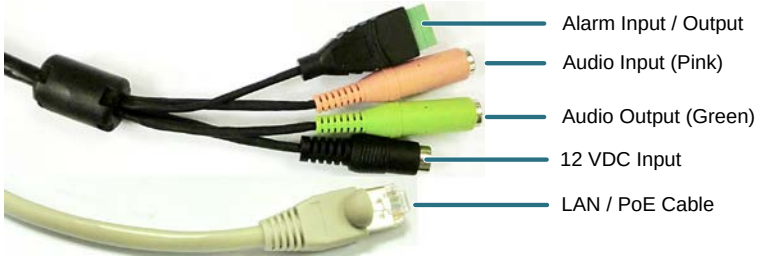
- EZN Series Camera x 1
- Quick Mounting Ring x 1
- RJ-45 Connector x 1
- Mounting Kit x 1
- 4-Pin Terminal Block x 1
- Software CD x 1
- Quick Installation Guide x 1
- Test-Out Cable x 1
  - Long Screw x 4 (for attaching the Quick Mounting Ring to the mounting surface)
  - Short Screw x 4 (for connecting the camera base to the quick Mount Ring)
  - Screw Anchor x 4 (in conjunction with Long Screw)
  - Hexagon Key x 1 (for adjusting the camera position)
  - Hexagon Wrench x 1 (for removing the sunshield)
  - Torx Wrench x 1 (for removing the lock tab)
  - Mounting Template x 1

Note:

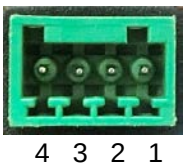
1. Equipment configurations and supplied accessories vary by country. Please consult your local EverFocus office or agents for more information. Please also keep the shipping carton for possible future use.
2. Contact the shipper if any items appear to have been damaged in the shipping process.

4.2 Cables

The Cables provide connections for Network, power, audio input / output and alarm input / output. The wires are illustrated and defined below. Note that microphones with external power supplies are required.



Pin Assignment for Alarm Input / Output



Pin 1: Alarm GND
Pin 2: Alarm In
Pin3: Alarm Out-
Pin4: Alarm Out+

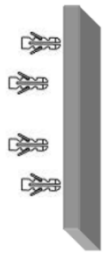
4.3 Basic Installation

This section will introduce the basic installation on mounting / wiring the camera, inserting a micro SD card and adjusting camera focus / zoom.

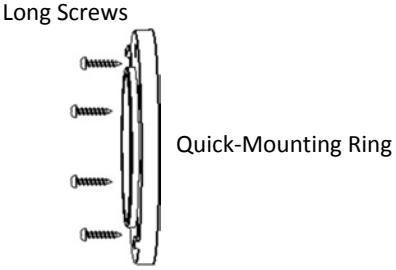
4.3.1 Mounting and Wiring

Follow the steps below for mounting and wiring the camera.

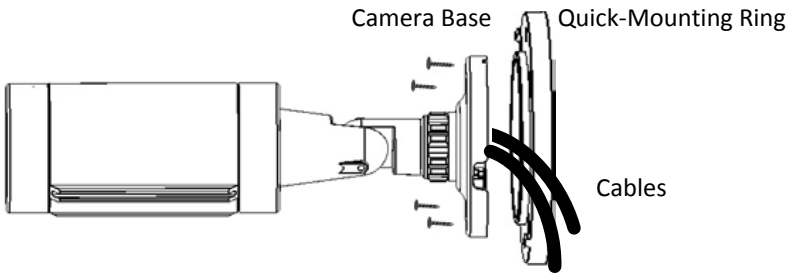
1. Before screwing the camera to the wall, drill four holes on the wall according to the hole-positions on the supplied Quick-Mounting Ring. If you wish to run the wires into the wall, drill another hole in the middle of the circular area within the Quick-Mounting Ring.
2. Push the four supplied anchors into the four holes on the wall.



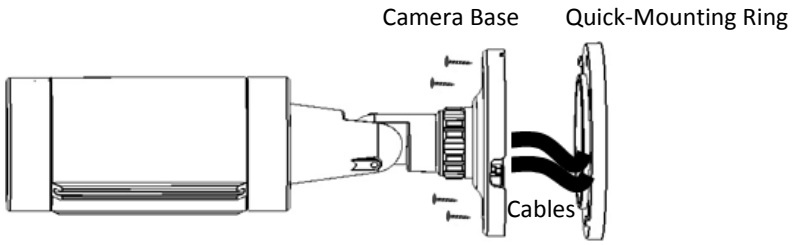
3. Place the Quick-Mounting Ring against the anchoring surface so that the holes line up. Screw the Quick-Mounting Ring to the wall using the supplied Long Screws.



4. Screw the camera body to the Quick-Mounting Ring using the supplied four Short Screws.
   a. If you want to wire the cables from the side of the camera base:

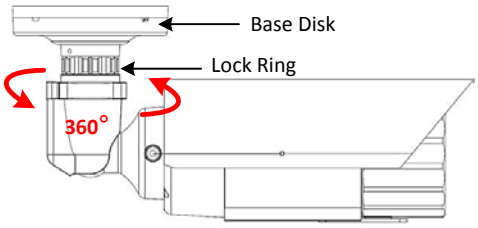


b. If you want to wire the cables through the wall, feed the cables through the wall and then screw the camera base to the Quick-Mounting Ring.

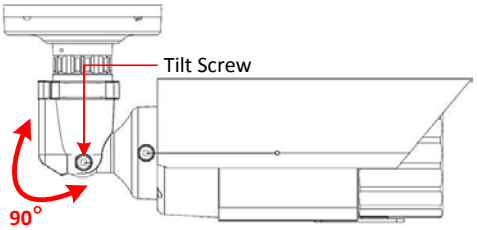


5. Connect the network, power and other cables of the camera to the related devices. Please refer to *4.2 Cables*.
6. Optionally insert a micro SD / SDHC card into the card slot. Please refer to *4.3.2 Inserting a Micro SD Card*.
7. Access the camera live view. Please see *5. Accessing the User Interface*. Or connect a handheld test monitor to the Test Output on the camera module for setting image zoom and focus. Please refer to *4.3.3 Adjusting Camera Focus / Zoom*.
8. Adjust the camera angles.

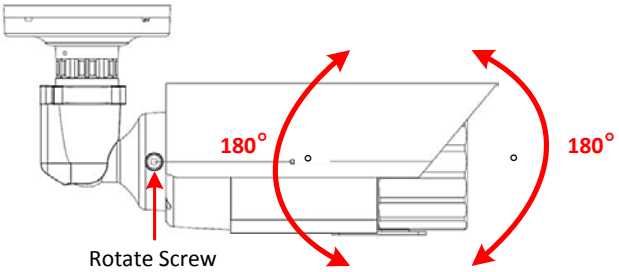
Pan Adjustment: Twist the Base Disk forcefully until it unscrews from the Lock Ring. Rotate the camera by 360° to the desired position and then screw the Lock Ring until it locks against the Base Disk.



Tilt Adjustment: Loosen the Tilt Screw using the provided hexagon key and adjust the tilt angle by 90°.



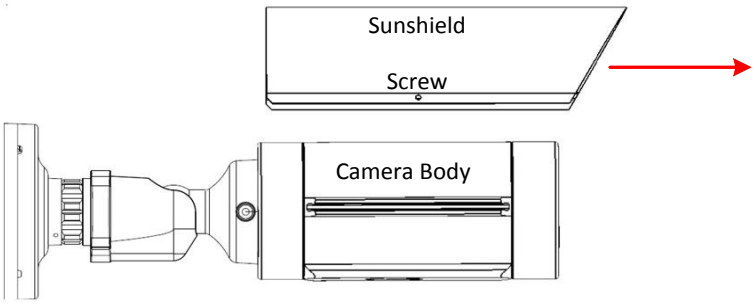
Rotational Adjustment: Loosen the Rotate Screws on both side of the camera body using the providing hexagon key and rotate the camera by 360° (180° to the left / 180° to the right).



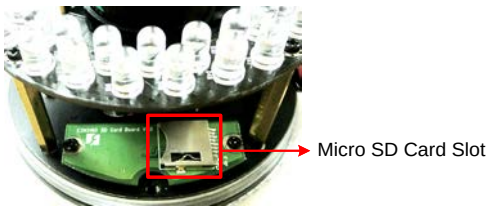
4.3.2 Inserting a Micro SD Card

You can optionally insert a micro SD card into the card slot on the camera module for recording videos.

1. Remove the Sunshield from the camera. Loosen the screw on the Sunshield using the provided hexagon wrench. Slide the Sunshield out from the rail on the camera body.



2. Rotate and then remove the camera cover, and insert a micro SD card into the card slot.



Note: After opening the camera cover for inserting the micro SD card, you have to close the cover immediately in case of reducing the absorption capacity of the desiccant bag inside the camera.

3. Firmly close the camera cover for waterproofing and then slide the Sunshield back to the camera body.

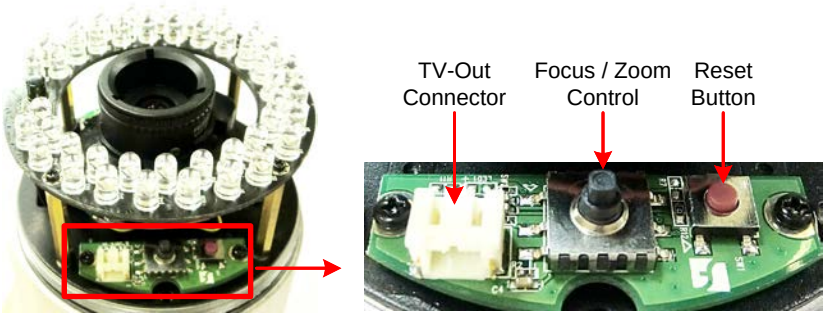
Note: When properly installed, the rear-side of the Sunshield should be even with the rear-side of the camera body. Extending the Sunshield in order to shade the lens will compromise the image quality.

4.3.3 Adjusting Camera Focus / Zoom

After wiring the cables, you can adjust the camera focus and zoom for better image quality.

Note: After opening the camera cover for adjusting the camera focus and zoom, you have to close the cover immediately in case of reducing the absorption capacity of the desiccant bag inside the camera.

1. Follow **Steps 1 ~ 3** in *4.3.2 Inserting a Micro SD Card* to remove the camera cover.
2. Connect the power cable of the camera to the power source.
3. Connect a handheld test monitor to the Test Output for setting image zoom and focus.
4. To adjust camera focus, push the **Focus / Zoom Control** to the left or right. To zoom in / out the camera, push the **Focus / Zoom Control** up or down.



5. Firmly close the camera cover for waterproofing and then slide the Sunshield back to the camera body.

Note: When properly installed, the rear-side of the Sunshield should be even with the rear-side of the camera body. Extending the Sunshield in order to shade the lens will compromise the image quality.

5. Accessing the User Interface

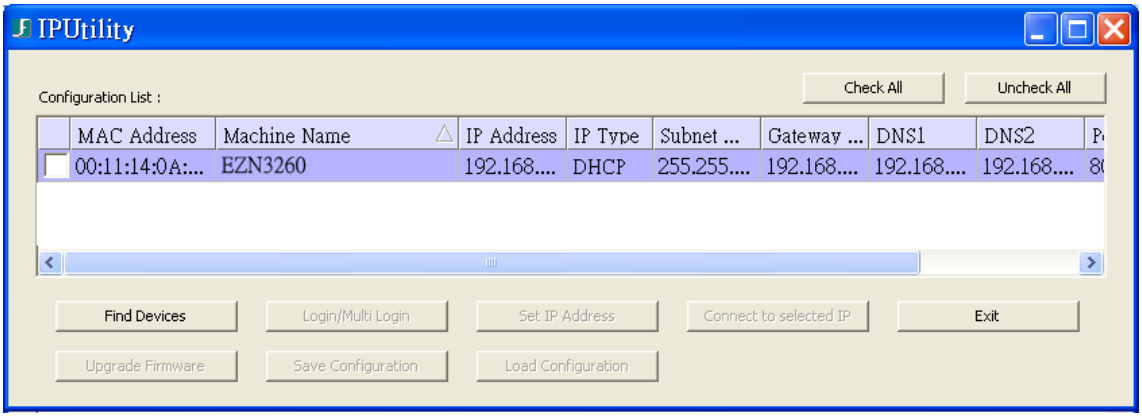
This section explains how to access the Web interface of the camera for configuration.

5.1 Checking the Dynamic IP Address

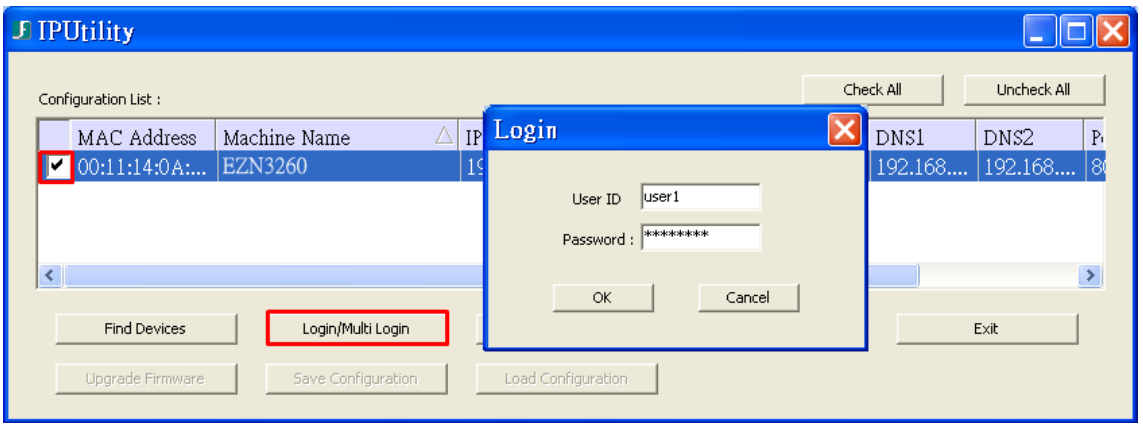
You can look up the IP address and access the Web interface of the camera using the **IP Utility (IPU)** software included in the software CD. Please connect the IP camera in the same LAN of your computer.

1. Install and then start the IPU program

. The following dialog box appears.



2. IPU will automatically search the cameras connected in the LAN. The default network values of the cameras will be displayed. By default, the network protocol of the camera is **DHCP.**
3. To configure the network settings, select a camera and then click **Login/Multi Login** to log in.

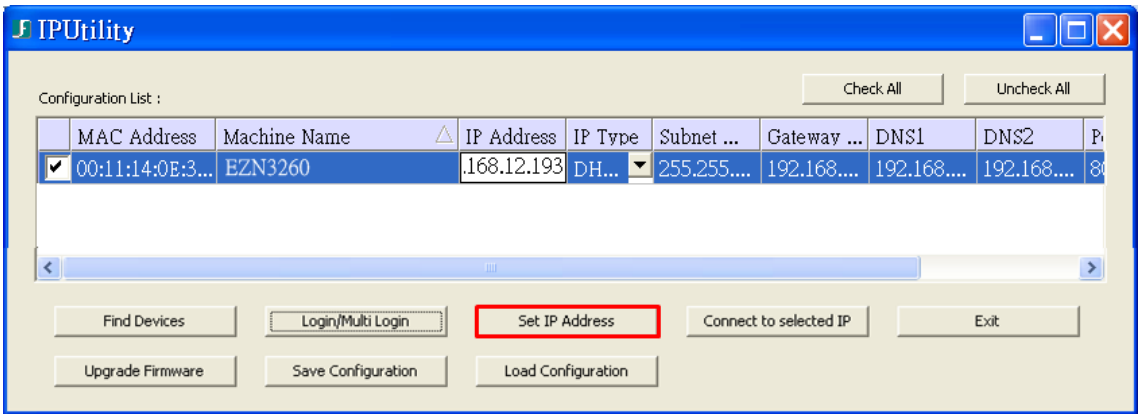


4. Type the user ID and password. Click **OK**.

Note:

1. The default user ID is **user1** and the default password is **11111111**.
2. If you select more than one camera that has the same user ID / password, you will be able to log in several cameras at once.

5. To change the IP settings, double-click the values in the column and type the numbers or select an option. Click **Set IP Address** to save the settings.



Note: Most networks support DHCP protocol, but if you are unsure of your network protocol, please consult your IP administrator for network configuration details.

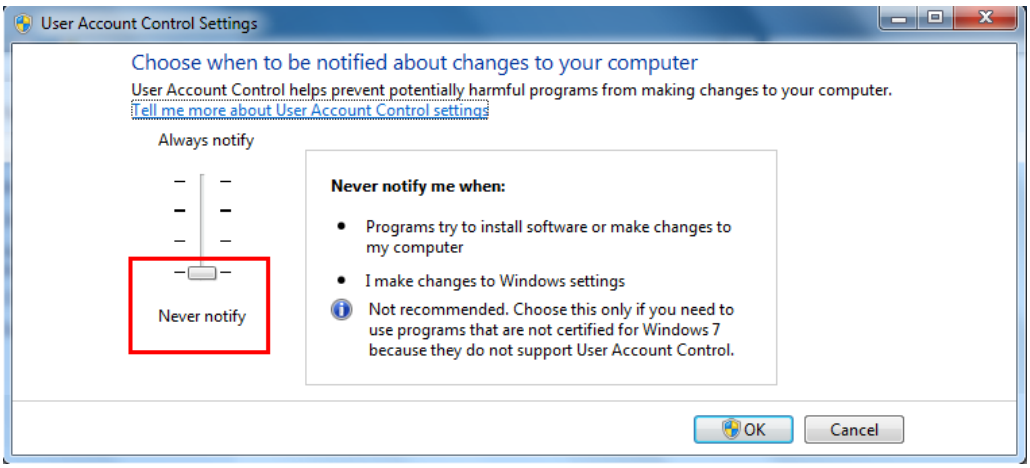
6. To access the camera, highlight the camera and click **Connect to Selected IP**. The Internet Explorer window pops up.
7. Type the user ID and password to log in. The Live View window of the camera appears.

Note: You might be required to download **ActiveX**, which is required to view the camera feed. If asked, click "**Yes**". For more details on setting up the Microsoft Internet Explorer, please refer to *5.2 Settings for Microsoft Internet Explorer.*

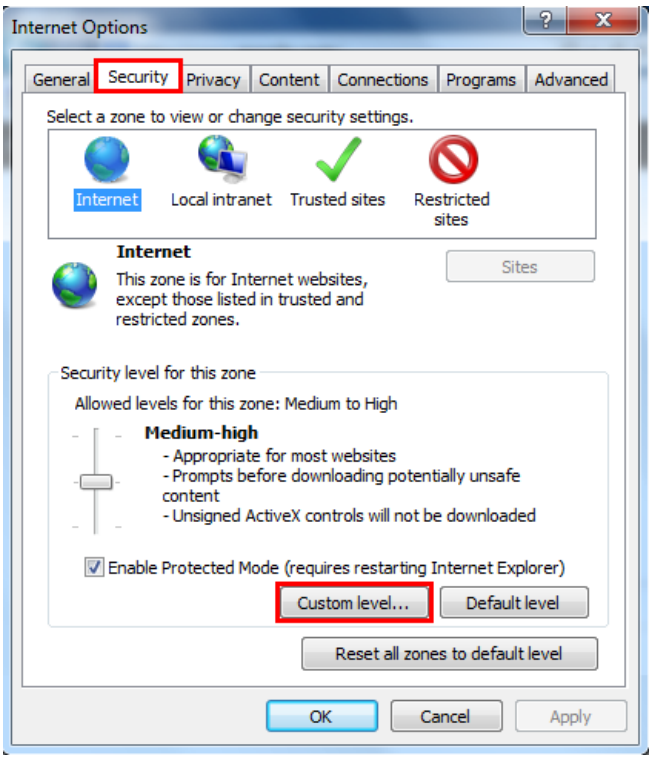
5.2 Settings for Microsoft Internet Explorer

To enable Remote Live View, Firmware Upgrade and ActiveX Prompt on Internet Explorer, some settings have to be complete. Please follow the steps below:

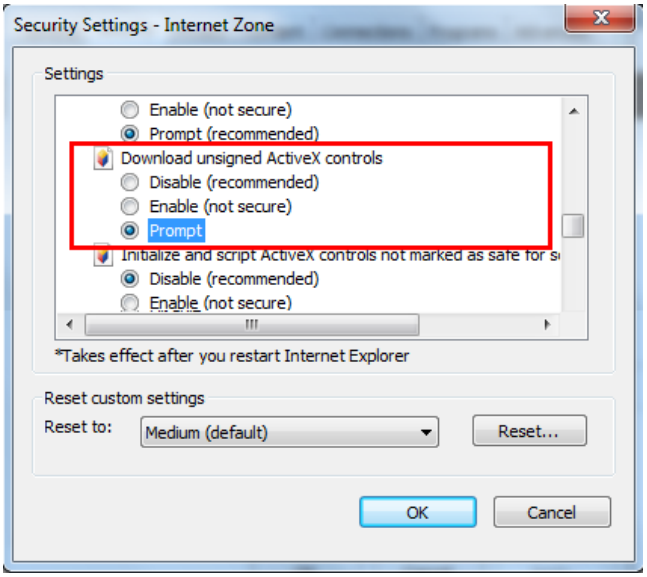
1. On the computer, click Start > Control Panel > System and Security > Action Center (click Change User Account Control Settings), the **User Account Control Settings** window appears. Adjust the slide bar to **Never Notify** and then click **OK**. Restart your computer if requested.

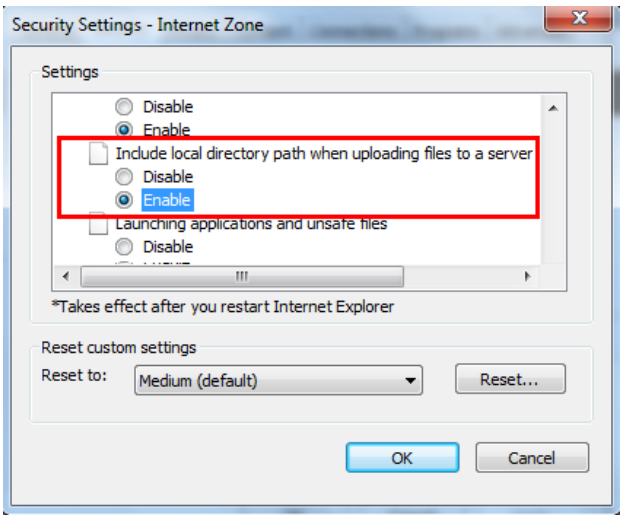

User Account Control Settings
Choose when to be notified about changes to your computer
User Account Control helps prevent potentially harmful programs from making changes to your computer.
Tell me more about User Account Control settings
Always notify
Never notify
Never notify me when:
Programs try to install software or make changes to my computer
I make changes to Windows settings
Not recommended. Choose this only if you need to use programs that are not certified for Windows 7 because they do not support User Account Control.
OK
Cancel

2. Open the Internet Explore, click Tools > Internet Options > Security Tab > Custom Level, the **Security Settings** windows appears.

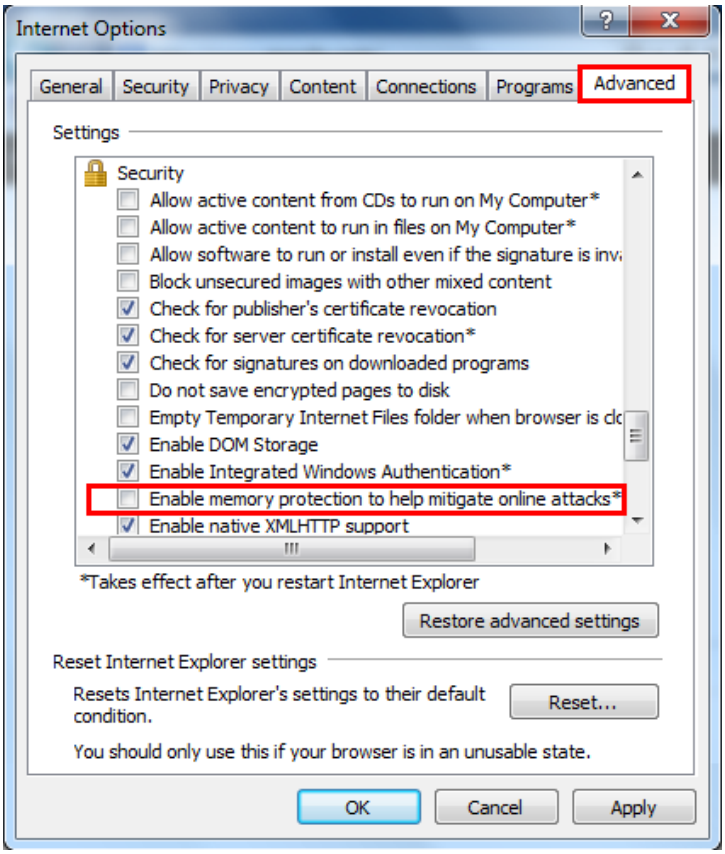


3. In the **Download unsigned ActiveX controls** field, select **Prompt.** In the **Include local directory path when uploading files to a server** field, select **Enable**. Click **OK**.





4. In the Internet Options window, click the **Advanced** tab and then disable **Enable memory protection to help mitigate online attacks**. Click **OK**.

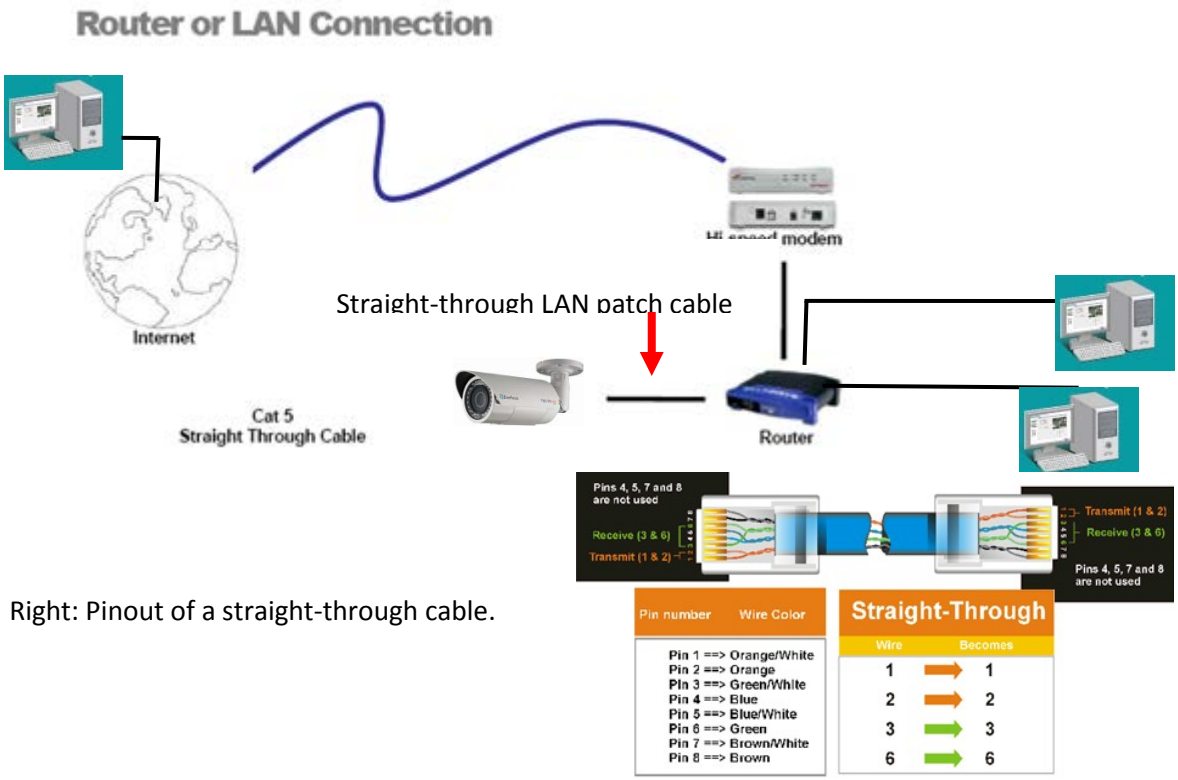

Internet Options
General
Security
Privacy
Content
Connections
Programs
Advanced
Settings
Security
Allow active content from CDs to run on My Computer*
Allow active content to run in files on My Computer*
Allow software to run or install even if the signature is inv
Block unsecured images with other mixed content
Check for publisher's certificate revocation
Check for server certificate revocation*
Check for signatures on downloaded programs
Do not save encrypted pages to disk
Empty Temporary Internet Files folder when browser is cl
Enable DOM Storage
Enable Integrated Windows Authentication*
Enable memory protection to help mitigate online attacks*
Enable native XMLHTTP support
*Takes effect after you restart Internet Explorer
Restore advanced settings
Reset Internet Explorer settings
Resets Internet Explorer's settings to their default condition.
Reset...
You should only use this if your browser is in an unusable state.
OK
Cancel
Apply

5.3 Connecting the Camera to the Network

There are three methods to connect the IP camera to the network: **Router or LAN Connection**, **Direct High-Speed Connection** and **One-to-One Connection**.

Router or LAN connection

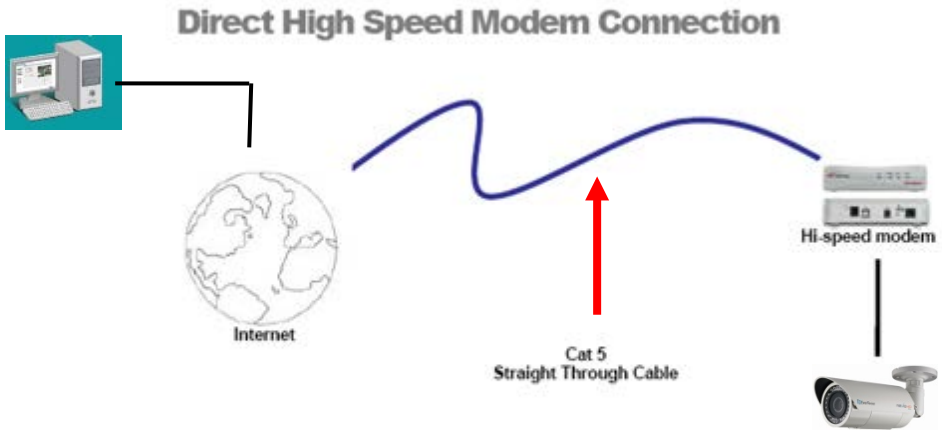
This is the most common connection in which the IP camera is connected to a router and allows multiple users on and off site to see the IP camera on a LAN/WAN (Internet). The camera must be assigned an IP address that is compatible with its LAN. By setting up port forwarding on the router, you can remotely access the cameras from outside of the LAN via the Internet. To remotely access the Web interface of the IP camera, please refer to *7.3.2 DDNS*. To set up port forwarding, please consult the manual of the router.



Right: Pinout of a straight-through cable.

Direct High-Speed Connection

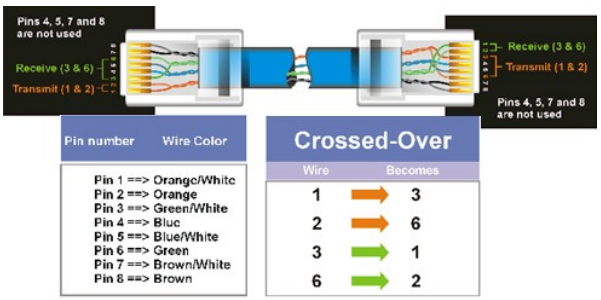
In a Direct High-Speed Connection, the camera connects directly to a modem without the need for a router. You need to set the static or dynamic WAN IP address assigned by your ISP (Internet Service Provider) in the camera's configuration web pages. To access the camera, just type "http://xxx", where xxx is the IP address given by your ISP. If you have a dynamic IP address, this connection may require that you use DDNS for a reliable connection. Please refer to *7.3.2 DDNS*.



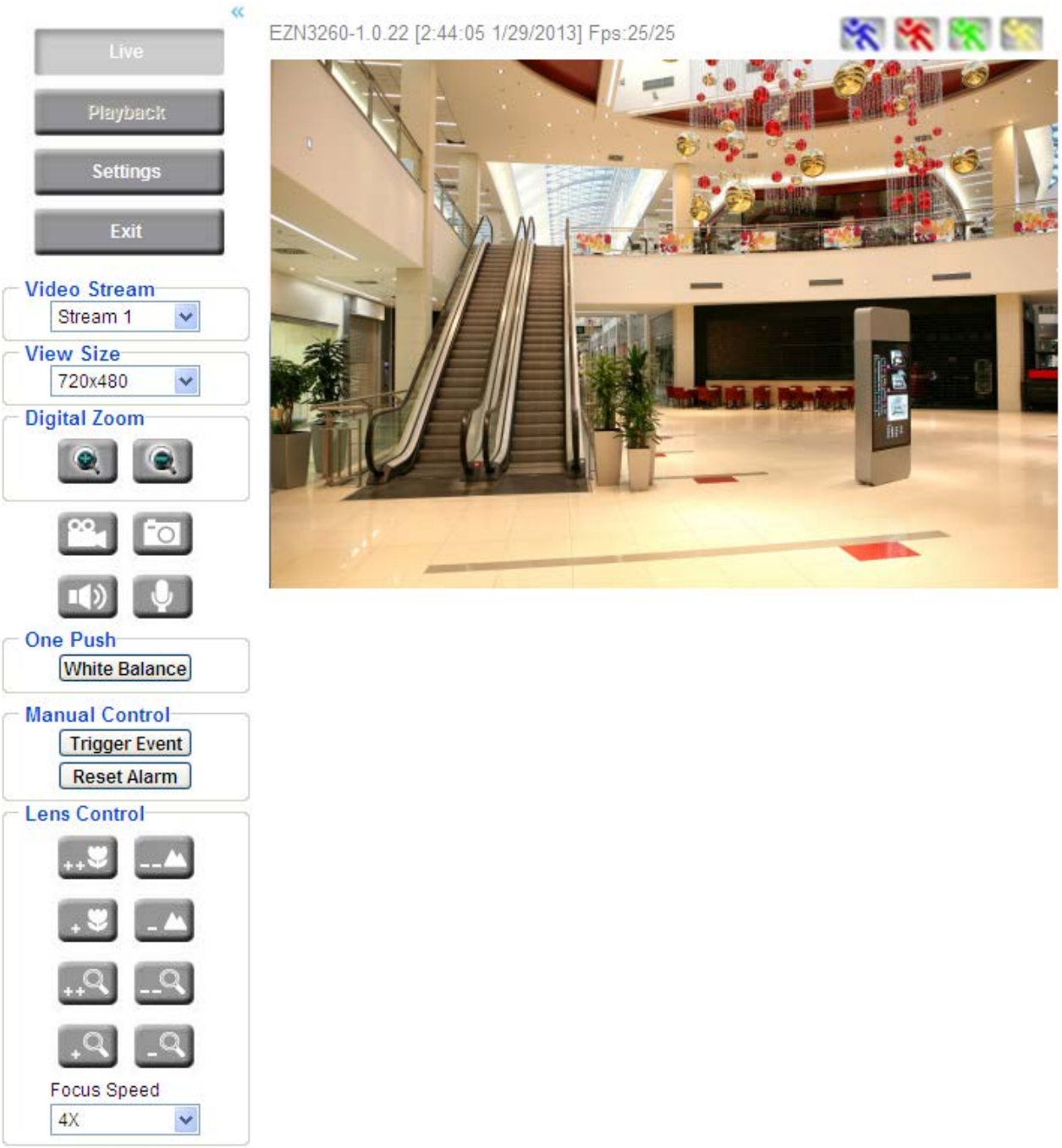
One-to-One Connection (Directly from PC to IP Camera)

You can connect directly without using a switch, router or modem. However, only the PC connected to the camera will be able to view the IP camera. You will also have to manually assign a compatible IP address to both the computer and the IP camera. Unless the PC has another network connection, the IP camera will be the only network device visible to the PC. See the diagram below:

Right: Pinout of a crossed-over cable.



5.4 Live View Window



1. Press the Live button to display the "Live View" window. Double-click on the image to show a full-screen display, double-click again or press ESC to return to the normal display. If you experience video feed lag time (if connected via Internet), you can reduce the resolution or limit the number of streams. See *7.4.1 Multi Streaming*.

2. Press the

button to play the recorded data directly from the on-camera Micro SD / SDHC card *(for this function to become active, you have to insert a Micro SD / SDHC card in the Micro SD / SDHC card slot on the rear panel of the camera. See 7.8.3 SD Card.*

3. Press the

button to enter the Settings page. On the Settings page, there are 8 submenu sections: [System Info], [User Config], [Network], [Video], [Audio], [User], [Event] and [System]. Click on the section buttons to open their configuration fields. See the Settings section below for more information.

4. Press the

button to exit the system and close this browser page.

5. **Video Stream**
   Select the Video Stream (Stream 1, Stream 2 or Stream 3) that will be displayed in the video box on the right. Stream 2 and Stream 3 are only selectable if you have enabled the stream. The default setting is Stream 1 only. See *7.4.1 Multi Streaming*.

6. **View Size**
   Use this to select the appropriate view size and shape of the video box on the right. A smaller size might increase transmission speed and video quality.

7. **Digital Zoom**
   Click the Zoom In / Zoom Out buttons or roll the mouse wheel to zoom in / out the camera live view up to 10x. Clicking on a magnified image will re-center the image around that point.

8. **One Push**
   This function is only available for EZN3160 / 3260. The **One Push** button can be displayed on the live view window by enabling the **Show One Push Buttons** function on the User Config < Live View Config Setting page (see *7.2.1 Live View Config*). To enable the button (turned from faded to clear), on the Video < Advanced Setting page, select **One Push** from the White Balance Settings Mode drop-down list, and click the **Apply** button. Once this is done, pressing the One Push button on the Live View Window will instruct the camera to adjust the white balance settings, and these settings will be active until the button is pushed again. This is like a “semi-automatic” way to adjust white balance to suit the user, if the Auto or Manual mode does not give the result the user wants.

9. **Record**

The Record button is used to record the current video stream. Click the Record button to start / stop recording. This icon is only for one-minute video recording. To record long-period recordings, please set a recording schedule (See *7.7.5 Schedule*). The location on your computer, where the image files will be saved to, and file size can be specified in the submenu (see *7.2 User Config).*

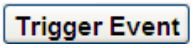
10. **Snapshot**

Click the Snapshot button to save a snapshot of the video image currently being displayed. The location on your computer where the snapshot data will be saved can be specified in "Settings > User Config" (see *7.2 User Config)*.

11. **Play Audio / Transmit Audio**

Click the "Play Audio" (speaker) and "Transmit Audio" (microphone) buttons to switch the sound on/off for the speaker and microphone, respectively (if such external devices have been connected to the camera directly or via the network).

12. **Manual Control**

– Trigger Event 

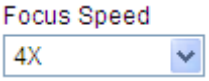
Press the "Trigger Event" button to trigger an event directly from the Live View window. If you have configured an event (in the Event submenu) that will trigger a reaction (like a recording) when a *Manual Trigger* event occurs, clicking this button will trigger that reaction. You can select what that reaction will be. You can, for instance, set the camera to record the audio/video feed to the SD card on board the camera. You can then click on the Playback button to open the Playback page and search for and play all such recordings that had been stored on the card. Such event actions will be effective once they have been configured in the "Event" menu (see *7.7 Event)*.

– Reset Alarm

Press the "Reset Alarm" button to reset the alarm output remotely.

13. **Lens Control**

These buttons control the lens actions. Click and hold the icon to continuously focus closer or farther. Click the icon to focus one step closer or farther. Click and hold the icon to continuously zoom in or zoom out. Click the icon to zoom in / out one step forward / backward.



: Select between 1X and 4X and then click the icons to change the focus speed.

14. **Status Display (info line that can be placed above video box or at bottom of page)**
    This shows the name of the camera that is currently active or being configured, current date/time and current frame rate. You can activate these info displays in the Settings > User Config page (see *7.2 User Config*).

15. **Event signal icons (above video screen)**
    When an alarm or motion event is triggered, a signal icon will appear at the top right of the Live View window to alert the user.

    Alarm event icon : When an alarm is triggered, this icon appears.

    Motion detection icons : The colors of these motion event icons correspond to the colors of the motion trigger areas you have configured in the Motion Detection submenu (see *7.7.2 Motion Detection*).

    Recording icon : When the camera is recording to a PC-based folder, this icon appears.

6. Playback

You can remotely play back the recordings stored in the on-camera micro SD card on the Web interface, or play back the recordings stored in the computer using the **ARV Viewer** included in the software CD.

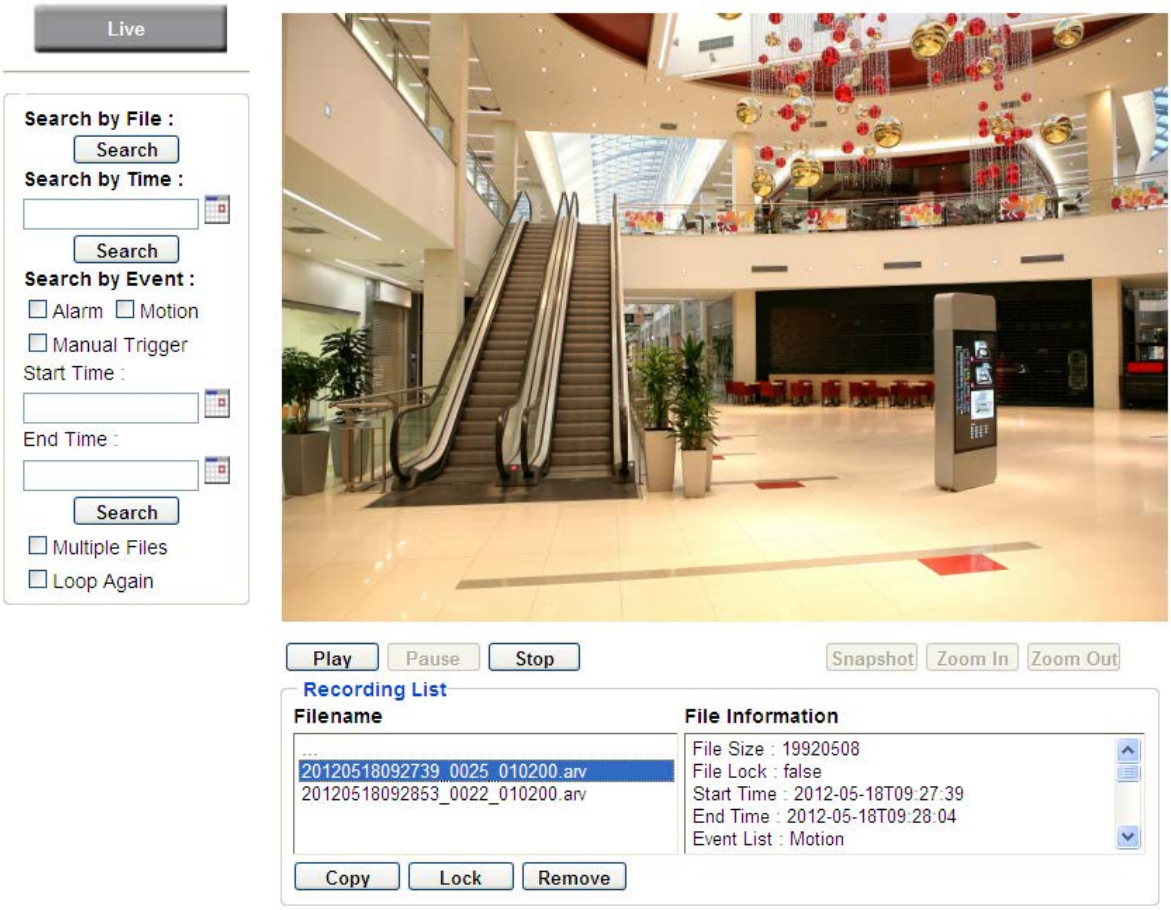
Playback is designed as a quick way to check recent recordings that were triggered by Events that were configured to “Record to SD Card” in the Settings > Event > Event Settings page (see *7.7.1 Event Settings*).

Note: Note that the Playback page is only accessible once the on-camera SD card is inserted and active.

6.1 Playback Window

On the Live View Window, click the Playback button

to open the Playback page.



Search by File: Click the Search button to search for all recording files on the on-camera SD card. Search results will be displayed in the Filename area.

Search by Time: Click the calendar icon and select the date and time from which you want to search until the present moment. Click search to get your search results, which will be displayed in the Filename area.

Search by event: Click the type of Event recordings you want to search for (Alarm, Motion, Manual Trigger) and then click the calendar icons to select the Start Time date/time and the End Time date/time of your search. Click Search to get your search results, which will be displayed in the Filename area.

Multiple Files: Check this box if you want the video player to play all the files in the selected folder. The files will be displayed in the Filename area.

Loop Again: Check this box if you want the video player to play the selected file over and over again.

Play: Once you have opened the file's folder and have clicked on the file to highlight it, its details will be displayed in the File Information area. You can now click Play to play that specific file.

Pause: Click this button to pause the playback.

Stop: Click this button to stop the playback.

【Recording List】

Filename: This area will display a list of search results (recording files and folders). Folders (named with the recorded date) will be displayed first. Click on the folder and click on each subfolder until the recording files (.arv) in that folder is listed.

File Information: Click a file on the Filename list, the selected file information will be listed.

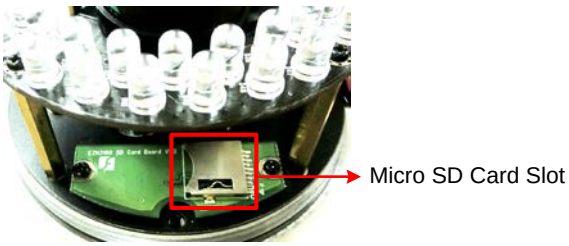
Copy: Click this button to copy the selected file to the computer-based folder of your choice. A browsing box will open so that you can search for the folder of your choice. You can use the ARV Viewer to play back the recordings recorded in your computer. For details on ARV Viewer, see *6.3 Playing Back Using ARV Viewer*.

Lock: Click this button to lock the selected file. This will protect that file from being overwritten during any overwrite procedure. The file will thus be saved on the micro SD card indefinitely. However, the file will still be deleted if the micro SD card is ever formatted.

Remove: Click this button to delete the selected file.

6.2 Setting Up the Playback Function

Note that the Playback function will not be active until the user has inserted a micro SD card in the camera's micro SD card slot. The card may also have to be formatted in the Settings submenu.



6.2.1 Preparing the Micro SD Card

Once you insert a functional Micro SD card into the slot, **the Playback button on the Live page should become active within seconds** (see section *6.2.2* below – the grey letters should turn white). **IF NOT**, do the following:

1. From the Live page, click Settings > System > SD Card. If no card has been inserted yet, the Remove button should be faded, indicating that no card is being detected. (If a card is inserted, and the **Remove** button is still faded, pull the card out and re-insert it.)
2. Slide the card into the slot until it clicks into position.
3. The **Remove** button should become active within a few seconds, indicating the card is active.
4. If the **Remove** button stays faded, click the Format button to format the card. NOTE: All data on the disk will be deleted if the **Format** button is clicked.

6.2.2 Testing the Playback Function

1. Once the micro SD card is detected by the system, the button

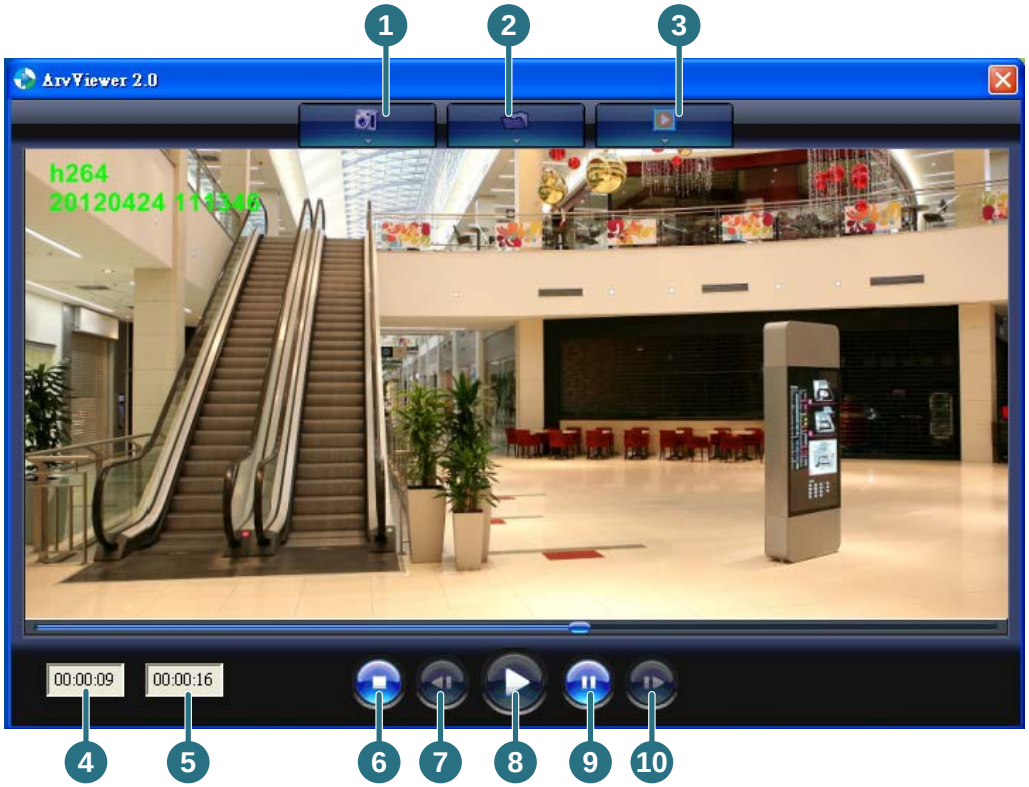
(inactive) will turn to

(active).
2. **To test the Playback function (this is not required)**, set up a "Manual Trigger" Recording Event by clicking Settings > Event > Event Settings.
3. Click the "Add" button on the middle right side of the page to open an "Add Event" box.
4. Give the event a name, like "Test 1".
5. In the "Event Triggered by" field, click on Manual Trigger.
6. Below this, check "Enable This Event", "Enable Post-trigger Buffer", and "Record to SD Card".
7. To save your settings, click OK, or close the box by clicking on the red x icon at top right of the box (in which case you will be asked if you want to save the data, to which you should reply OK). The box will close and the new event will be listed in the list area of the Event Settings page.
8. Look at the "Post-trigger Buffer" at the bottom to make sure the buffer time is set to 10 seconds.
9. Click "Apply" to make sure all settings are saved.
10. Click the Live button to go back to the Live page.
11. Get ready to click the Trigger Event button at the bottom of the page. Before you do, see if you can find something in the view screen that will give you a visual time marker. For instance, if you can get your hand in front of the camera's lens, get ready to count down on your fingers.
12. Click the Trigger Event button and slowly count down on your fingers in front of the lens (if you are able to do so – if not, try to find visual cues on the view screen that will help you to mark the moment you pushed the trigger). The recording period will be as long as the buffer time you selected – the default period is 10 seconds.
13. Click the Playback button to open the Playback page.
14. There are different ways to search for recording files on the camera's micro SD card (i.e. the Playback memory). For a recent recording like your test event, simply click the "Search" button under the "Search by File" header.
15. If the micro SD card is active and formatted correctly, the recording folder's name (the recording day's date) will appear in the Filename box at the bottom. Click on this folder to open it. If there are sub-folders, click on the bottom one (the most recent would be at the bottom) until you can click on a file that cannot open to another sub-level and shows data in the File Information box to the right. This would be the file of the most recent recording event.
16. To play this file, click the Play button below the video box. The test footage you have recorded should start playing. Play time should be 10 seconds if you left the Post-trigger Buffer as 10 seconds.

6.3 Playing Back Using ARV Viewer

You can play back the recordings stored in the computer using the **ARV Viewer**

included in the software CD. To store the recordings in the computer, please refer to **Recording List** > **Copy** in *6.1 Playback Window*.



No.	Item Name	Descriptions
1	**Snapshot**	Click to take and save a snapshot.
2	**Load File**	Click to load the recordings for playing back.
3	**Convert ARV to AVI**	Convert the recording from ARV format to AVI format.
4	**Playback Time**	Display the playback time.
5	**Total Time of Recording**	Display the total time of the recording.
6	**Stop**	Click to stop playing the recording.
7	**Step Reverse**	Click to display the previous frame.
8	**Play**	Click to play back the recording.
9	**Pause**	Click to pause the recording.
10	**Step Forward**	Click to display the next frame.

7. Settings

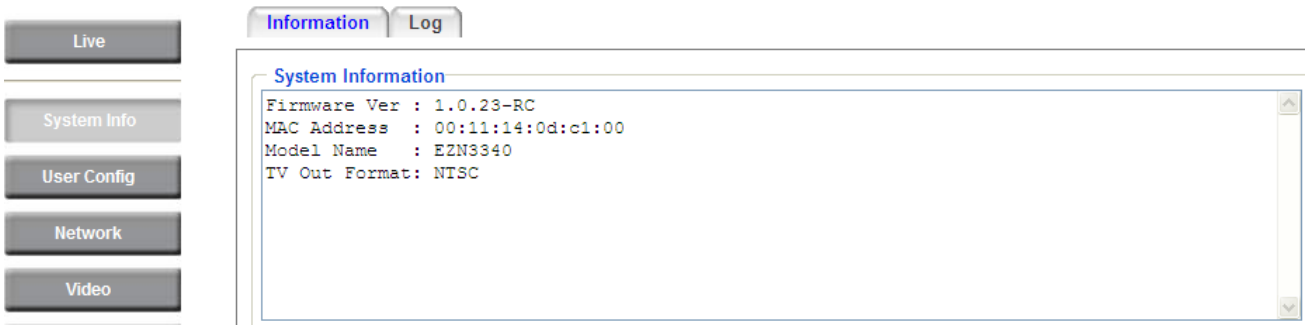
Click the Settings button on the Live View Window to enter the settings submenu. There are nine buttons on the left-side of the submenu: Live, System Info, User Config, Network, Video, Audio, User, Event and System. Click the Live button can go back to the Live View Window.

7.1 System Info

The System Information and System Log can be checked on this page. Click the top tab of the one you want to see.

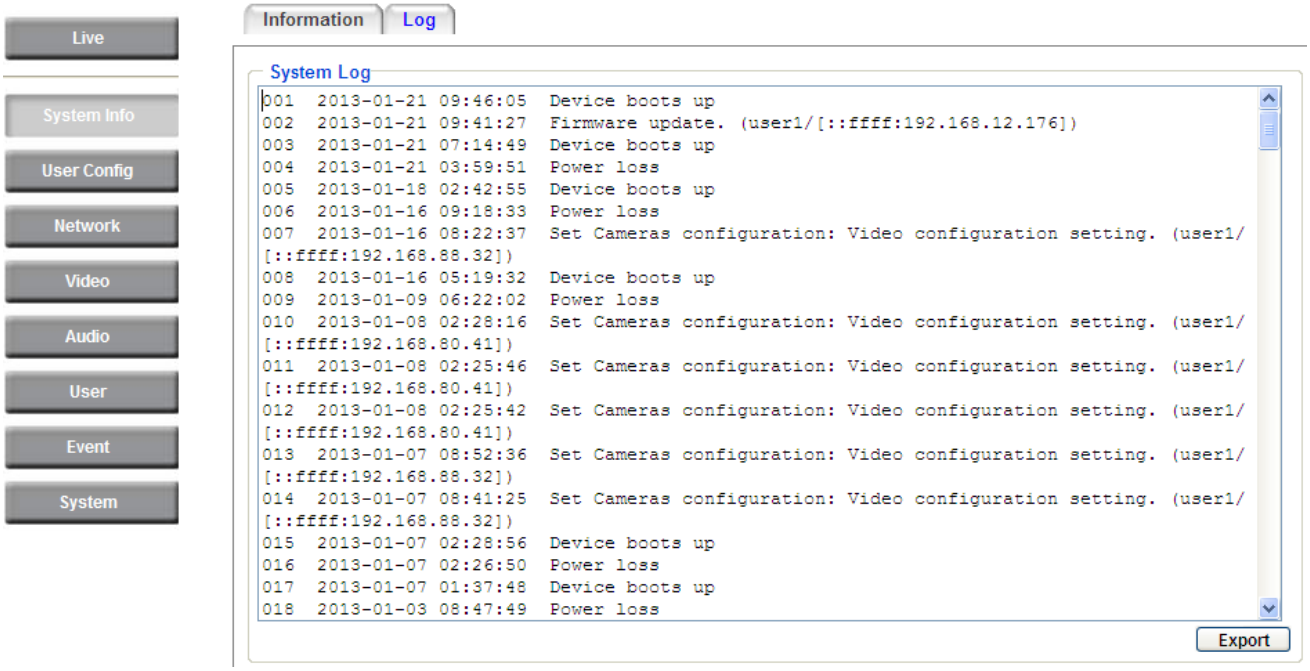
7.1.1 Information

Click the Information tab, the following dialog box appears. These values cannot be changed on this page, and are for reference only.



7.1.2 Log

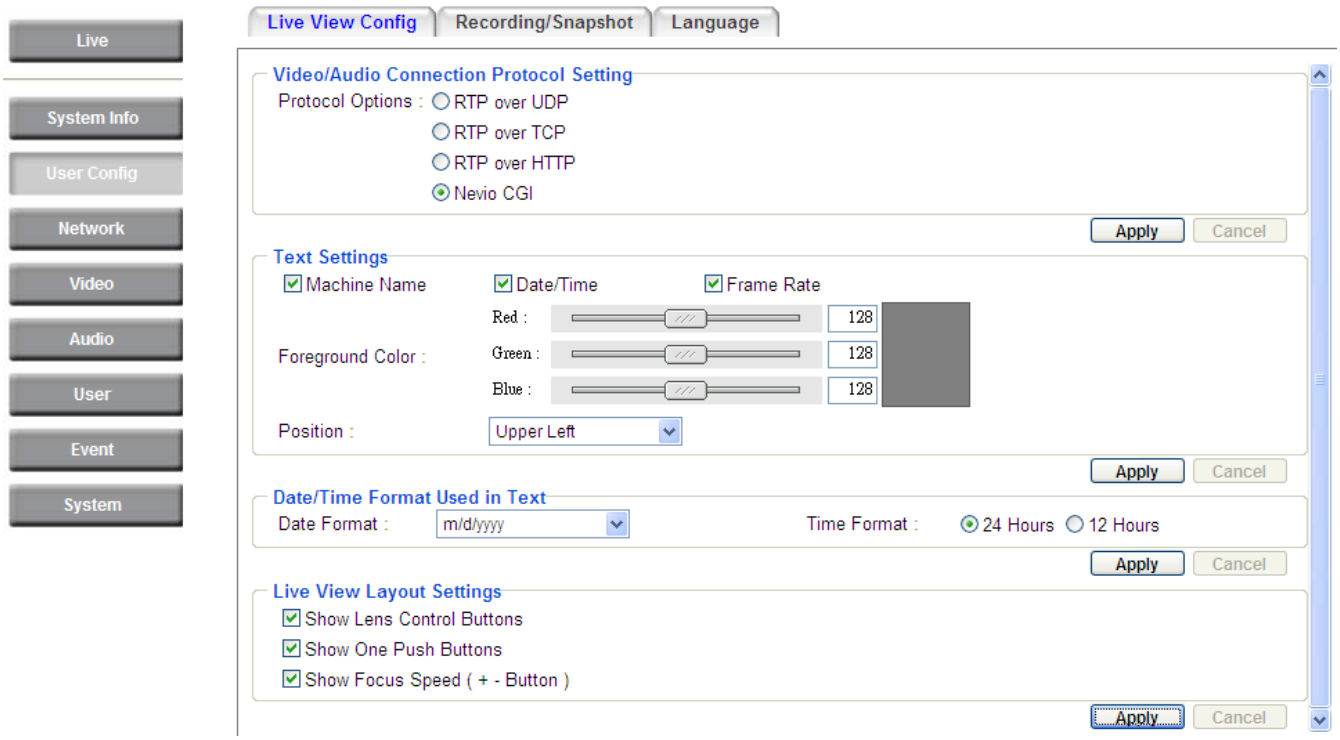
Click the Log tab, the following dialog box appears. The sequence number, date, time and event messages of the log event will be displayed in the System Log field. The log will display the last 256 log events. Click the Export button to export the system log event list into a ".txt" file and select the location where the exported log file will be saved to.


Live
System Info
User Config
Network
Video
Audio
User
Event
System
Information
Log
System Log
001 2013-01-21 09:46:05 Device boots up
002 2013-01-21 09:41:27 Firmware update. (user1/[::ffff:192.168.12.176])
003 2013-01-21 07:14:49 Device boots up
004 2013-01-21 03:59:51 Power loss
005 2013-01-18 02:42:55 Device boots up
006 2013-01-16 09:18:33 Power loss
007 2013-01-16 08:22:37 Set Cameras configuration: Video configuration setting. (user1/
[::ffff:192.168.88.32])
008 2013-01-16 05:19:32 Device boots up
009 2013-01-09 06:22:02 Power loss
010 2013-01-08 02:28:16 Set Cameras configuration: Video configuration setting. (user1/
[::ffff:192.168.80.41])
011 2013-01-08 02:25:46 Set Cameras configuration: Video configuration setting. (user1/
[::ffff:192.168.80.41])
012 2013-01-08 02:25:42 Set Cameras configuration: Video configuration setting. (user1/
[::ffff:192.168.80.41])
013 2013-01-07 08:52:36 Set Cameras configuration: Video configuration setting. (user1/
[::ffff:192.168.88.32])
014 2013-01-07 08:41:25 Set Cameras configuration: Video configuration setting. (user1/
[::ffff:192.168.88.32])
015 2013-01-07 02:28:56 Device boots up
016 2013-01-07 02:26:50 Power loss
017 2013-01-07 01:37:48 Device boots up
018 2013-01-03 08:47:49 Power loss
Export

7.2 User Config

Each user can set a different configuration for his/her Live page here. These settings will be applied to the logged-in user's Live page every time he/she logs in.

7.2.1 Live View Config



【Video/Audio Connection Protocol Setting】 You can transmit the data stream from the IP cameras using the RTSP (Real Time Streaming Protocol) on the network. The RTSP is a protocol that allows you to access video streams by using the compatible media players. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

- **RTP over UDP:** The RTSP protocol uses UDP for camera data stream transmission.
- **RTP over TCP:** The RTSP protocol uses TCP for camera data stream transmission.
- **RTP over HTTP:** The RTSP protocol uses HTTP for camera data stream transmission.
- **Nevio CGI:** This is EverFocus' protocol designed for EverFocus' IP devices. Select this protocol for camera data stream transmission.

【Text Settings】 Check the box of each option (**Machine name**, **Date/Time**, **Frame Rate**) to display this info on the Live View Page.

Foreground Color: Slide the Red, Green and Blue bars to create your preferred text color for the info text line.

Position: Select the position where the text will be displayed. Choose from Upper Left / Lower Right / Lower Left.

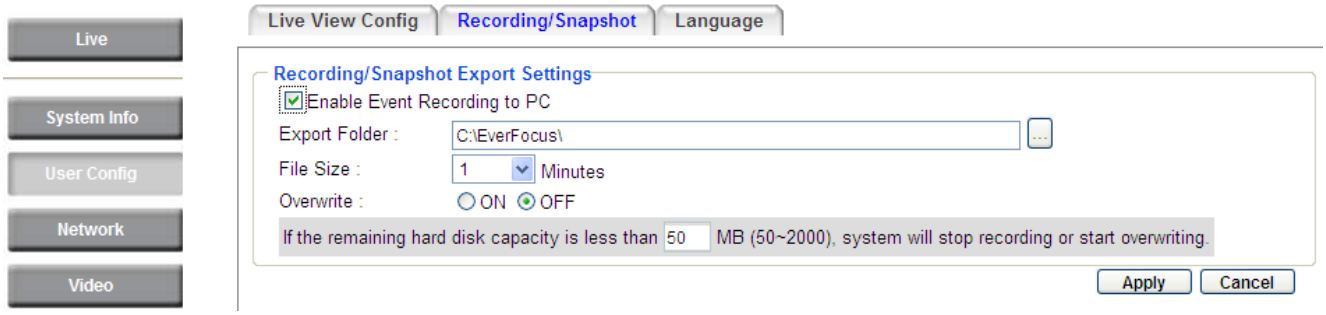
Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

【Date/Time Format Used in Text】 Click the dropdown menu to select **date/time format** from the listed options. Click on the desired hour format. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

【Live View Layout Settings】 Check the **Show Lens Control Buttons**, **Show One Push Buttons** or the **Show Focus Speed** boxes if you want to show these buttons on the Live View Page. Uncheck these boxes to hide these buttons. The Show One Push Buttons is unavailable for EZN3340. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.2.2 Recording / Snapshot

This configures where your **Record Button** and **Snapshot Button** ( ) files will be saved if you click one of these buttons. Selectable folders will be on the computer only, not on the on-camera SD card.



Enable Event Recording to PC: Checking this box will let the system save **Record/Snapshot Button** recordings to the folder configured below on the user's PC.

Export Folder: Select the Export folder for the action above by clicking on the browse **(…)** button, and then select the desired folder.

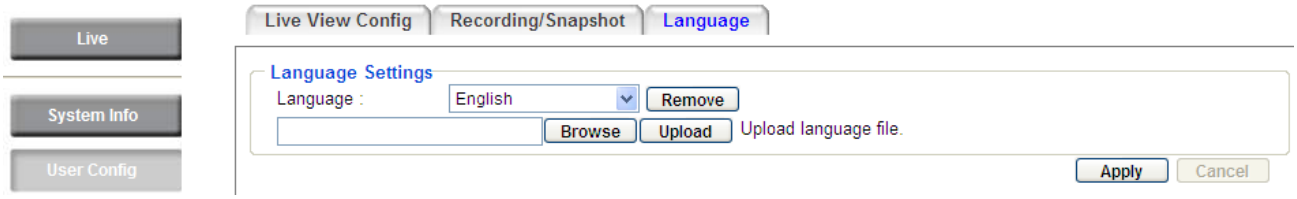
File size: The user can limit the size of each recorded file here (in minutes). When a single recording file exceeds the time you set, the system will create a new file to save that data to.

Overwrite: Select "**ON**" for overwriting recording/snapshot file when the disk storage capacity is full. The user can set the storage capacity limitation in the in-sentence field in the gray box below the Overwrite setting: "If the remaining hard disk capacity is less than ____ MB (50~2000), … "

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.2.3 Language

Select the language to be displayed on the Web interface of the IP camera. The default language is English.



To add a new language not listed in the current Language list, click the **Browse** button to locate the new language file (.evb) on your computer and then click the **Upload** button. Updated language files might be available on the manufacturer's website. Contact your vendor if required.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

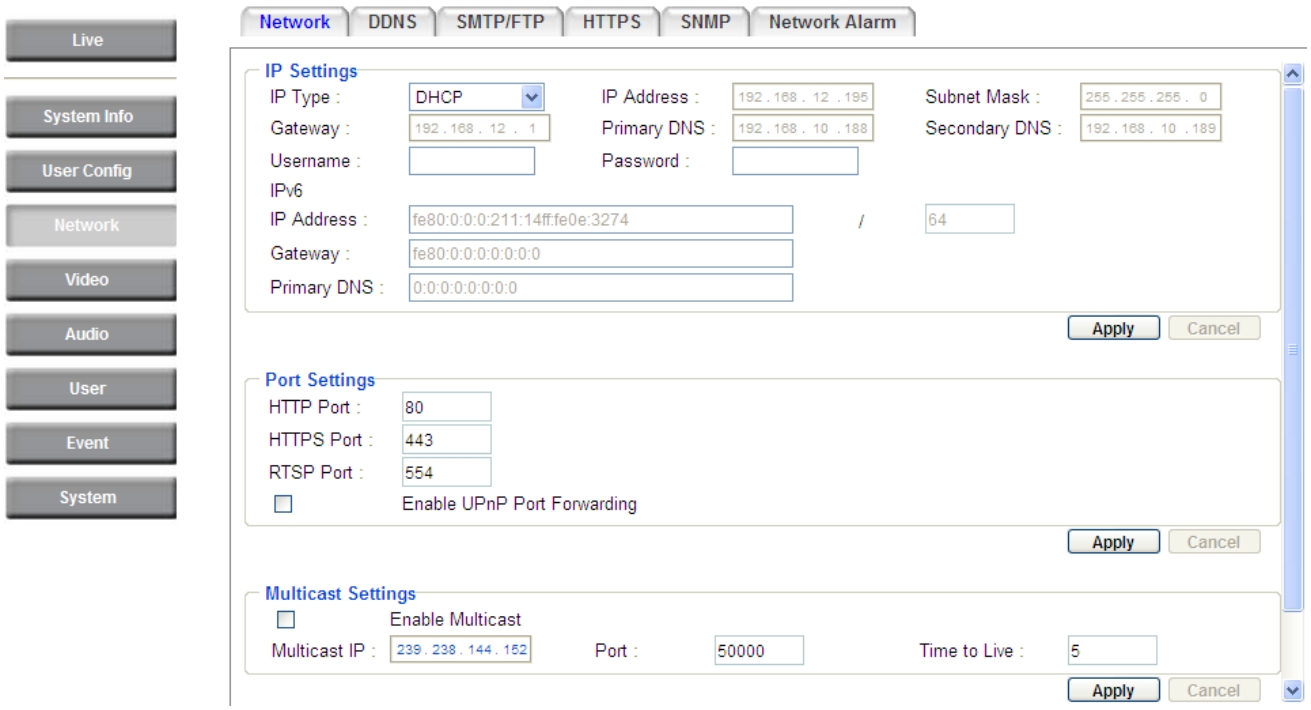
Note: Uploading a new language file will cause the system to reboot automatically. Please create a new network connection to the IP camera when the reboot is complete.

7.3 Network

This page covers network-related settings, including Network, DDNS, SMTP/FTP, HTTPS, SNMP, and Network Alarm.

7.3.1 Network

The following information is required to configure the network settings. Contact your network administrator or your internet service provider to get the info.



【IP Settings】

IP Type: Refer to the network administrator for these settings of the server. **Default:** DHCP

- **DHCP:** This setting lets the system use an automatically assigned (dynamic) IP address. This address can change under certain circumstances. For instance, when the camera's network switch/hub has to be rebooted. Do not assign to the DHCP server the same IP addresses used for the other network cameras and PCs with unique IP addresses.
- **Static IP:** The user can manually set the Static IP address. This type of address is stable and cannot change, but the user has to make sure there are no address conflicts with other network-connected devices.
- **PPPoE:** This is a DSL-connection application. The ISP will ask the user to input a username and password. Contact your ISP for these details.

Note: If PPPoE is selected as the IP type, the supplied IP Utility program will not be able to detect the device.

IP address: When DHCP is not used, the user needs to manually enter the IP address of the camera. Do not enter an IP address that is already used for your computer or other network cameras.

Subnet Mask: This field is used to set the subnet mask for your network, so that the IP camera will be recognized within the network. Example: 255.255.255.0. When DHCP is selected, the DHCP server will assign this value automatically.

Gateway: This field is used to set the gateway for your network so that the IP camera will be recognized within the network. When DHCP is selected, the DHCP server will assign this value automatically.

Primary DNS: Enter the IP address of the DNS server if this is provided by an ISP.

Secondary DNS: If your ISP provided you with a secondary DNS address, please enter it here.

Username: Enter the account's username (used only for PPPoE).

Password: Used only for PPPoE.

IPv6: Enter the IPv6 details in this area, if this applies to your system.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

【**Port Settings**】Enter the HTTP, HTTPS and RTSP port numbers. Check the **Enable UPnP Port Forwarding** box to enable the UPnP function. Click **Apply** to save the settings.

Promoted by the UPnP Forum (Universal Plug and Play), the UPnP is a networking architecture providing compatibility among networked devices listed in the networked device table. Enable the UPnP function means you can directly connect the cameras listed in the networked device table by clicking on them.

Note:

1. For the UPnP function to work, an UPnP-enabled router is required.
2. The UPnP function may fail owing to the compatibility between the camera and the router.

【**Multicast Settings**】Enable if required, fill in the setting options and click **Apply** to save.

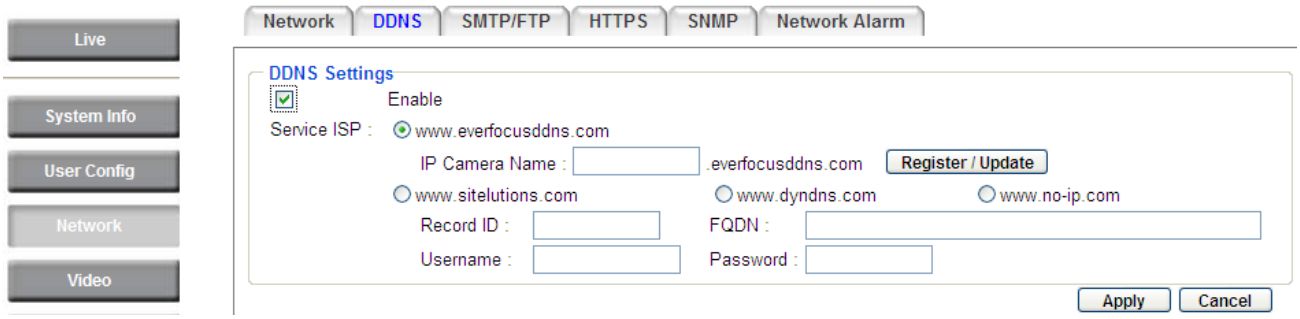
7.3.2 DDNS

DDNS (Dynamic Domain Name System) is a service used to map a domain name to the dynamic IP address of a network device. You can set up the DDNS service for remote access to the IP camera.

DDNS assigns a domain name (URL) to the IP camera, so that the user does not need to go through the trouble of checking if the IP address assigned by DHCP Server has changed. Once the IP is changed, the IP camera will automatically update the information to the DDNS to ensure it is always available for remote access.

Before enabling the following DDNS function, user should have applied for a host name from the DDS service provider's website. We support these four DDNS server providers: www.everfocusddns.com, www.sitelutions.com, www.dyndns.com, and www.no-ip.com

Note: We highly recommend that you use **xxxx.everfocusddns.com** for the simplicity of setting up your IP cameras.



【DDNS Settings】

Enable: Check this box to enable the DDNS function.

Service ISP: You can either apply for a host name from **EverFocus** or **other DDNS server providers**.

If you choose the EverFocus DDNS server, you can obtain a free host name from EverFocus by following the steps below:

- **From EverFocus:** To obtain a free host name from EverFocus, type a desired host name in the textbox, click the **Register / Update** button, and then click the **Apply** button.
- **From other DDNS server providers:** To obtain a domain name from one of the three DDNS server providers, you have to register your name with the provider first, and then select the provider and fill in the required information. Please refer to the specific DDNS company's website for further information.

  Record ID: Type the record ID if provided by the DDNS server provider.

  FQDN: Type the fully qualified domain name applied from the DDNS server provider. For example, xxxx.dyndns.com

Username / Password: Type the login account of your DDNS server provider.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

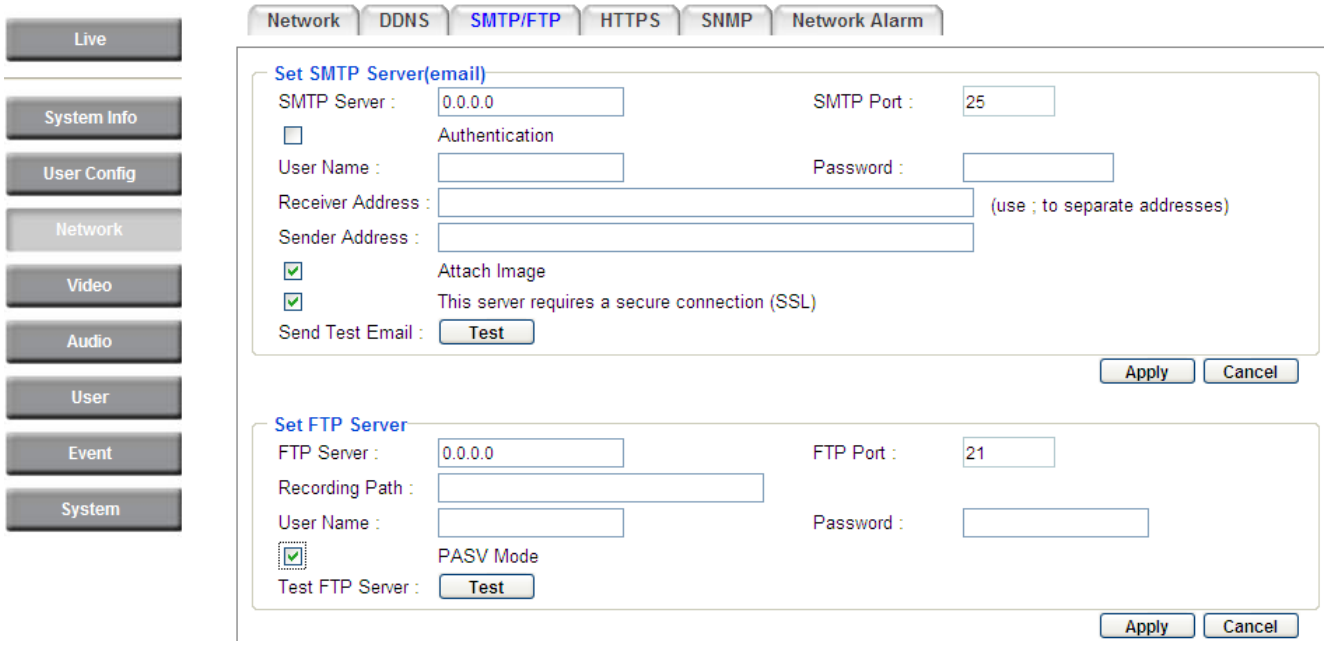
Note:

1. In order to support the full functionality of the camera, you must open the port numbers (80, 554, 443) on the router for remote access to the IP camera. This function is available on most routers in the market and is often known as “Port Forwarding”. To set up Port Forwarding, please consult the manual of the router.

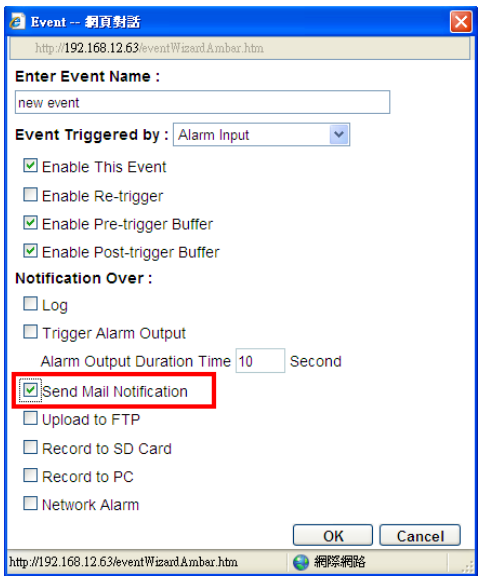
2. In certain router models, it is possible that you will not be able to access the camera using DDNS while inside the router’s network. Please try using a PC located outside of your router’s network.

   Default Ports on All EverFocus IP Cameras:
   HTTP: 80
   RTSP: 554
   HTTPS: 443

7.3.3 SMTP / FTP



【Set SMTP Server (email)】 This area is for configuring the mail server that is used to send e-mail text notifications and one image file from the camera to predefined addresses via SMTP. Note that to enable e-mail notification function, you have to check the **Send Mail Notification** item on the Event dialog box (see *7.7.1 Event Settings)*.



SMTP Server: Enter the IP address or the host name of the SMTP server used to send e-mails.

SMTP Port: Enter the port number for SMTP. The default is 25.

Authentication: Check this box if the SMTP server requires authentication (user/password).

User name: Input the user's login ID if the SMTP server requires authentication.

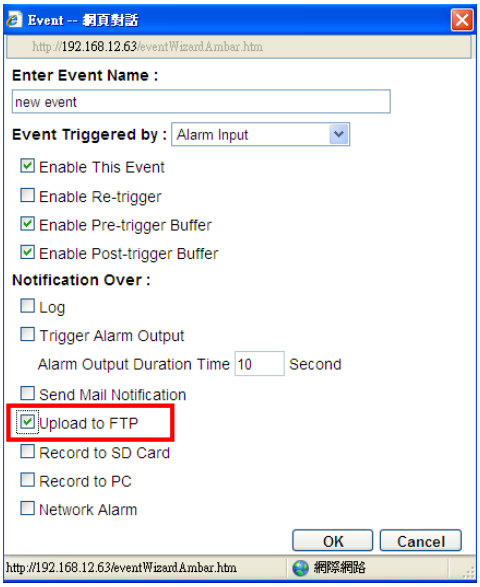
Password: Input the user's login password if the SMTP server requires authentication.

Receiver Address: Input the e-mail addresses for receiving an e-mail message when an EVENT is enabled and triggered. Please use "**;**" to separate multiple addresses.

Sender Address: Input the sender's e-mail address, so that the receiver can recognize the sender when an Event message is received.
Attach Image: Check this box if you want to attach an image when an alarm is triggered or an IP camera detects events.
This server requires a secure connection (SSL): Check this box to enable the SSL function. Enable this function means you can access the camera through the SSL protocol that provides communication security over the Internet.
Send Test Email: Click the **Test** button to send a testing email to the assigned address.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

【**Set FTP Server**】The settings relating to the FTP server used to transmit the alarm recordings can be configured here. Note that to enable uploading recordings to the FTP server function, you have to check the **Upload to FTP** item on the Event dialog box (see *7.7.1 Event Settings)*.

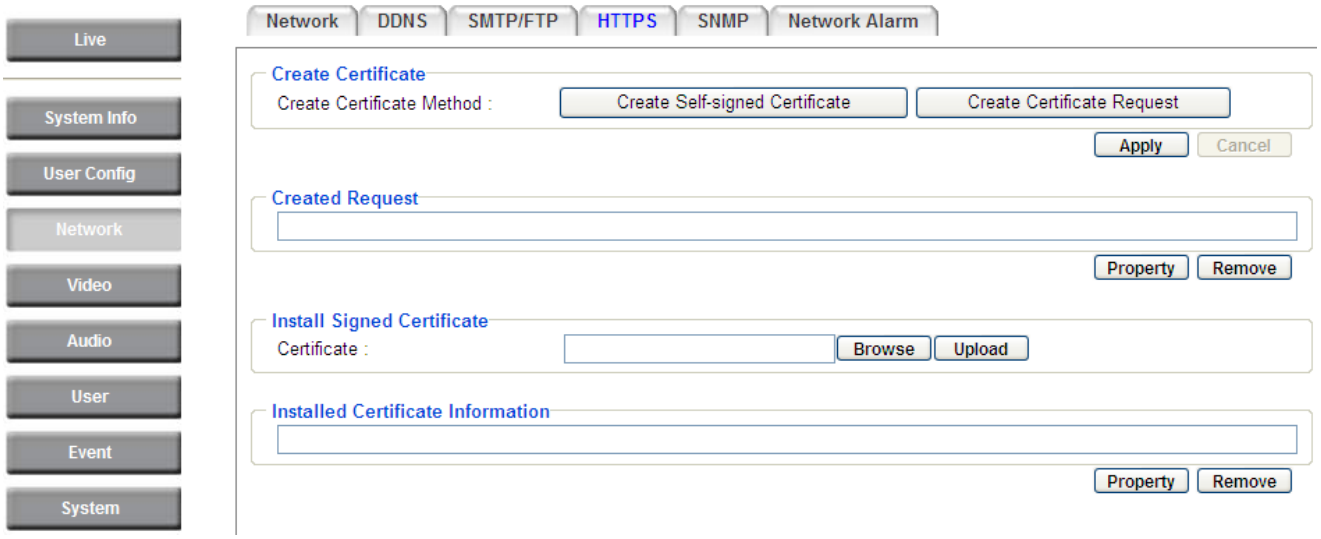


FTP Server: Enter the IP address or the host name of the FTP server.
FTP Port: Enter the port number for the FTP server. Default is 21.
Recording Path: Assign the recording path.
User Name: Set FTP User's name.
Password: Set FTP password.
PASV mode: Check to enable Passive mode. Passive mode is normally enabled. If a connection cannot be established, uncheck "PASV Mode".
Test FTP Server: Click the **Test** button to send a testing file to the assigned FTP server.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.3.4 HTTPS

Hypertext Transfer Protocol Secure (HTTPS) is a combination of the Hypertext Transfer Protocol and the SSL/TLS protocol that provides encrypted communication and secure identification of a network web server.



Before using the HTTPS function for communication with the IP camera, a Certificate must be created first. There are two ways to create and install a certificate: **Create Self-Signed Certificate** and **Create Certificate Request**.

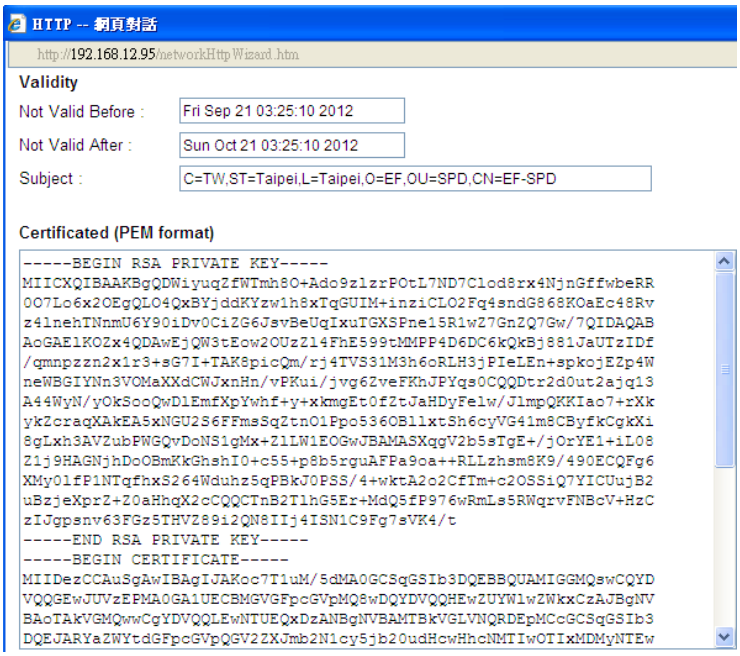
Create Self-Signed Certificate

Please note that even though self-signed certificates are free and offer some protection, true security is only implemented after the installation of a signed certificate issued by a certificate authority.

1. Click the **Create Self-Signed Certificate** button, the following dialog appears.

2. Type the required Certificate information and then click the **Apply** button. The subject line will be displayed in the Installed Certificate Information field.

3. Click the **Property** button, a pop-up window appears to display the details of the certificate.

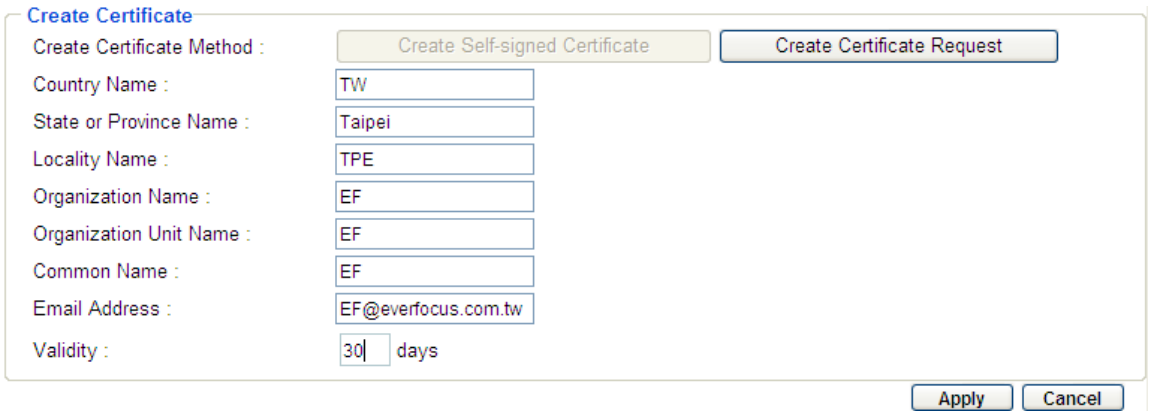


4. To optionally create and install other certificates, remove the existing one by clicking the **Remove** button to erase the certificate.
5. On the Web page, change the address from “http://” to https:// in the address bar and press Enter on the keyboard. Some Security Alert dialogs will pop up. Click **OK** or **Yes** to enable HTTPS.

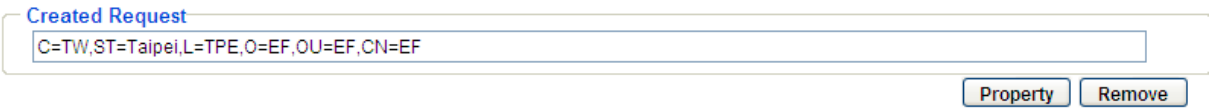
Create Certificate Request

You can apply for an official certificate from an issuing Certificate Authority.

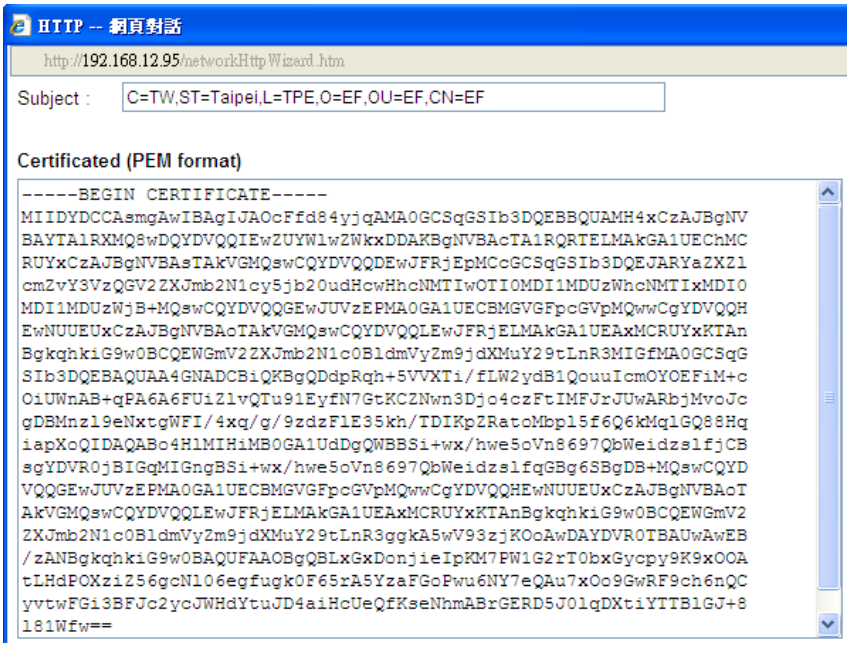
1. Click the **Create Certificate Request** button, the following dialog appears.



2. Type the required Certificate information and then click the **Apply** button. The subject line will be displayed in the Created Request field



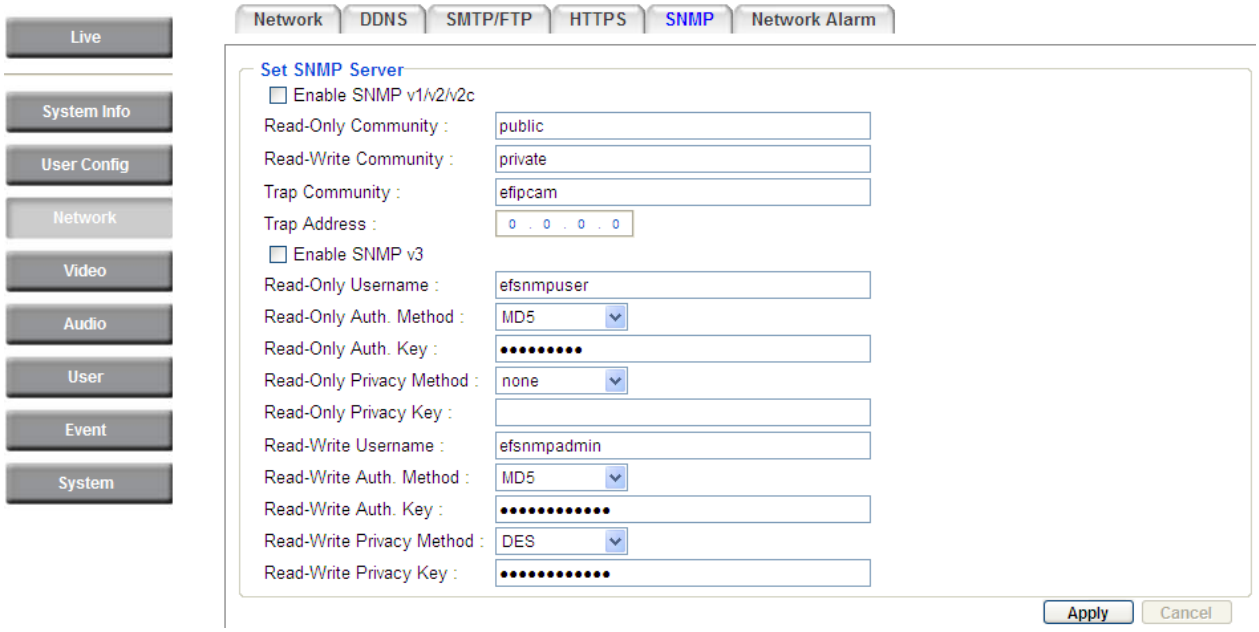
3. Click the **Property** button, a pop-up window appears to display the details of the certificate.



4. To optionally create and install other certificates or request, remove the existing one by clicking the **Remove** button to erase the certificate or request.
5. Copy the contents of the Certificate request (in PEM format) and paste it to the certificate request field on the Web page of the 3rd-party certification authority such as Symantec VeriSign. Wait for the certificate authority to issue an SSL/TLS certificate and then download the issued certificate on your computer.
6. In the Install Signed Certificate field, click the **Browse** button to search for the issued certificate, and then click the **Upload** button to import the certificate. Once the certificate has been uploaded, this field will show the subject line of the certificate.

7.3.5 SNMP

The default values for SNMP v1/v2/v2c and SNMP v3 are already filled in. Click either of the Enable buttons to enable either of the two. Make your changes as desired. Click on the Trap Address field to enter the digits, if required.



Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.3.6 Network Alarm

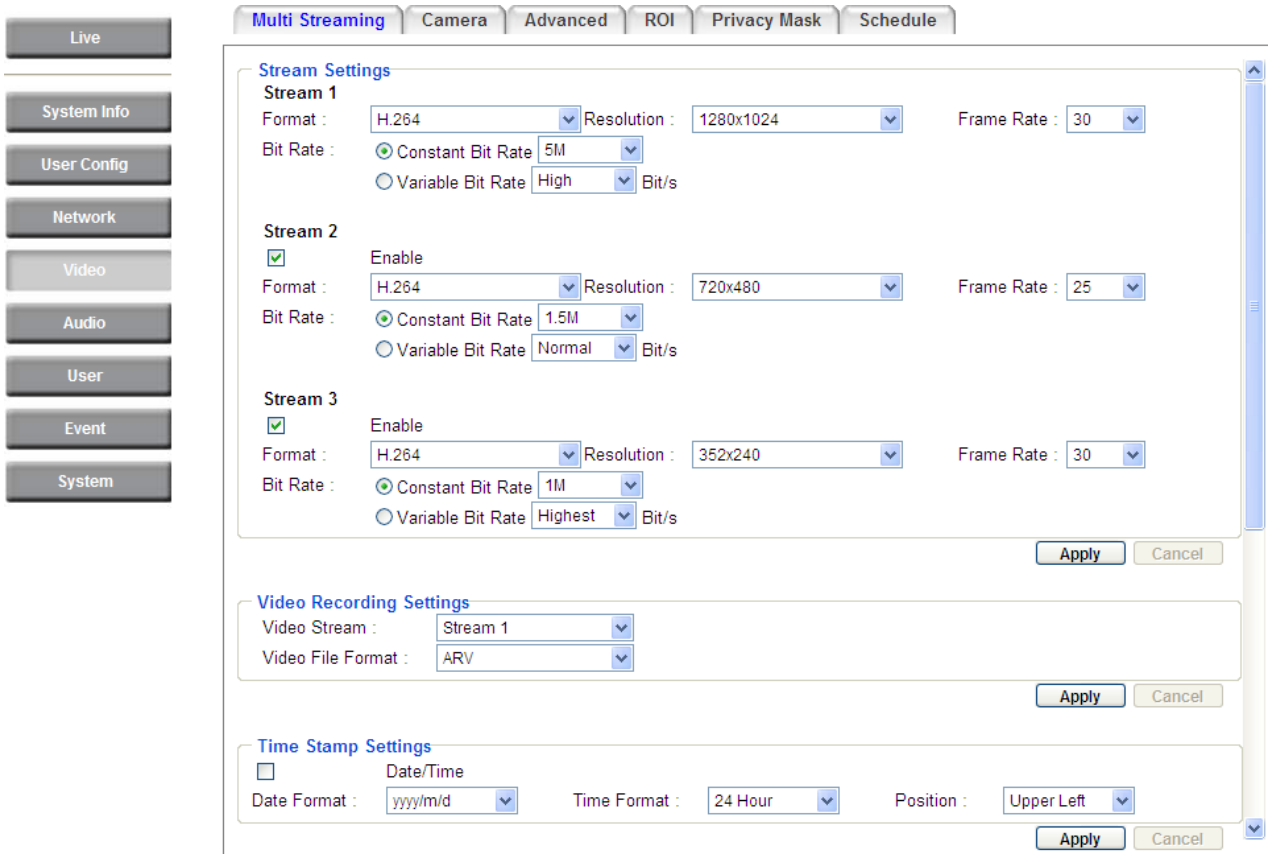
This function works with EverFocus's CMS software, e.g. the PowerVideo Plus. For the setting details, please refer to the CMS network alarm protocol.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.4 Video

The settings relating to video such as streaming, camera OSD can be configured on this page. The "Video" page has six tabs: Multi-streaming, Camera, Advanced, ROI, Privacy Mask and Schedule.

7.4.1 Multi Streaming



【**Stream Settings**】This IP camera can output three video streams simultaneously. For each of these streams, the user can set the compression format, resolution, bit rate, and frame rate individually. Stream 1 is always enabled for live view. To enable Stream 2 and/or Stream 3, check the “Enable” box.

Note: If you connect to the camera via the Internet and experience a delay (lag time) in the video feed, try to reduce the number of streams and the quality and resolution of the streams – but keep the frame rate at its maximum.

Format: Select the encoding format – H.264 or MJPEG.
Resolution: Select the most suitable resolution for your needs.
Frame Rate: Select from 1 to 30 fps.
Bit Rate: If required, select whether you want the stream to stream a **Constant Bit Rate** or a **Variable Bit Rate**, and set the values of whichever option you choose.

【**Video Recording Settings**】Select the stream you want to configure and then select whether you want the recording files of that stream to be saved in AVI or ARV format.

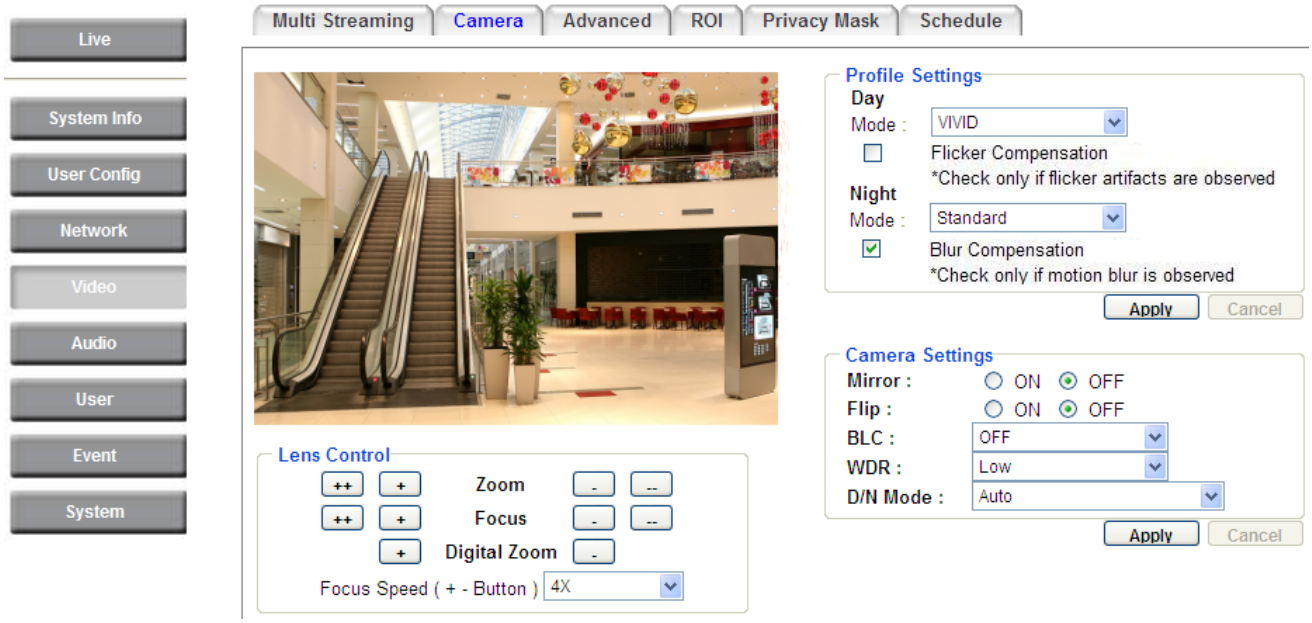
【**Time Stamp Settings**】 You can select the Date/Time format, position, and add the setting to the streaming.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.4.2 Camera

You can configure the basic camera settings on this page.

EZN3160 / 3260:



【**Profile Settings**】 The Profile Setting is designed with four camera modes (Vivid/High Contrast, Standard, More Detail and User Define), which can be applied in various scenes to enhanced image quality. You can apply different camera modes to the daytime and night time.

Day Mode: Select a camera mode and then click the **Apply** button to save the settings.

- **Vivid:** Select Vivid mode to have images with optimized contrast ratio. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **Standard:** Select Standard mode to have images with system configured settings. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **More Detail:** Select More Detail mode to enhance the dark parts of the images. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **User Define:** Select User Define mode to customize the camera settings. You can configure all the camera settings on the Advanced setup page.

Flicker Compensation: Check the box to enable the Flicker Compensation function. Please enable this function only if flicker artifacts are observed.

Night Mode: Select a camera mode and then click the **Apply** button to save the settings.

- **High Contrast:** Select High Contrast mode to have images with higher contrast ratio. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **Standard:** Select Standard mode to have images with system configured settings. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **More Detail:** Select More Detail mode to enhance the dark parts of the images. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **User Define:** Select User Define mode to customize the camera settings. You can configure all the camera settings on the Advanced setup page.

Blur Compensation: Check the box to enable the Blur Compensation function. Please enable this function only if motion blur is observed.

【Camera Settings】

Mirror: Switch Mirror ON to rotate the image horizontally around a vertical axis.

Flip: Switch Flip ON to rotate the image vertically around a horizontal axis.

BLC: Back Light Compensation (BLC) is used to make the subject appear clearer when it is set against a bright background.

- **OFF:** Select to switch Back Light Compensation functions off.
- **ON (BLC):** The BLC can increase the exposure of a dark area surrounded by a brighter area, HLC can decrease the exposure of bright areas surrounded by darker areas. This enables the camera to better display information that would otherwise have been “whited out”, like a license plate between two bright headlights on a dark road.
- **ON (HLC)**: The Highlight-Suppression BLC is used to reduce the brightness of light sources in a specific area. It is activated only in a low illumination environment to minimize the effects of glare from bright lights such as spotlights, street lights or headlights in the field of view.

WDR: The Wide Dynamic Range (WDR) function provides clearer images when both of the very bright and dark areas simultaneously appear on the camera view. There are four value options: OFF, Low, Middle and High. Note that when WDR is ON, some parts of the image may appear solarized. This is normal for WDR, and is not a camera malfunction.

D/N Mode

- **Auto**: Select to let the camera automatically switch to Night mode (black and white images with IR LED on) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.
- **Day**: Select to keep the camera in Day mode (color images with IR LED off), even in nighttime.
- **Night**: Select to keep the camera in Night mode (black and white images with IR LED on), even in daytime.
- **Schedule**: Select to let the camera to switch to Day mode or Night mode (IR LED on) based on the day and night schedule settings. To configure the daytime / nighttime of each day, please refer to *7.4.6 Schedule*.
- **Auto mode without IR LED:** Select to let the camera automatically switch to Night mode (black and white images with IR LED off) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.
- **Night mode without IR LED:** Select to keep the camera in Night mode (black and white images with IR LED off), even in daytime.
- **Schedule without IR LED:** Select to let the camera to switch to Day mode or Night mode (IR LED off) based on the day and night schedule settings. To configure the daytime / nighttime of each day, please refer to *7.4.6 Schedule*.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

【**Lens Control**】Set the Zoom, Focus and Digital Zoom actions of your camera.

++: Click and hold the button to add the value continuously.

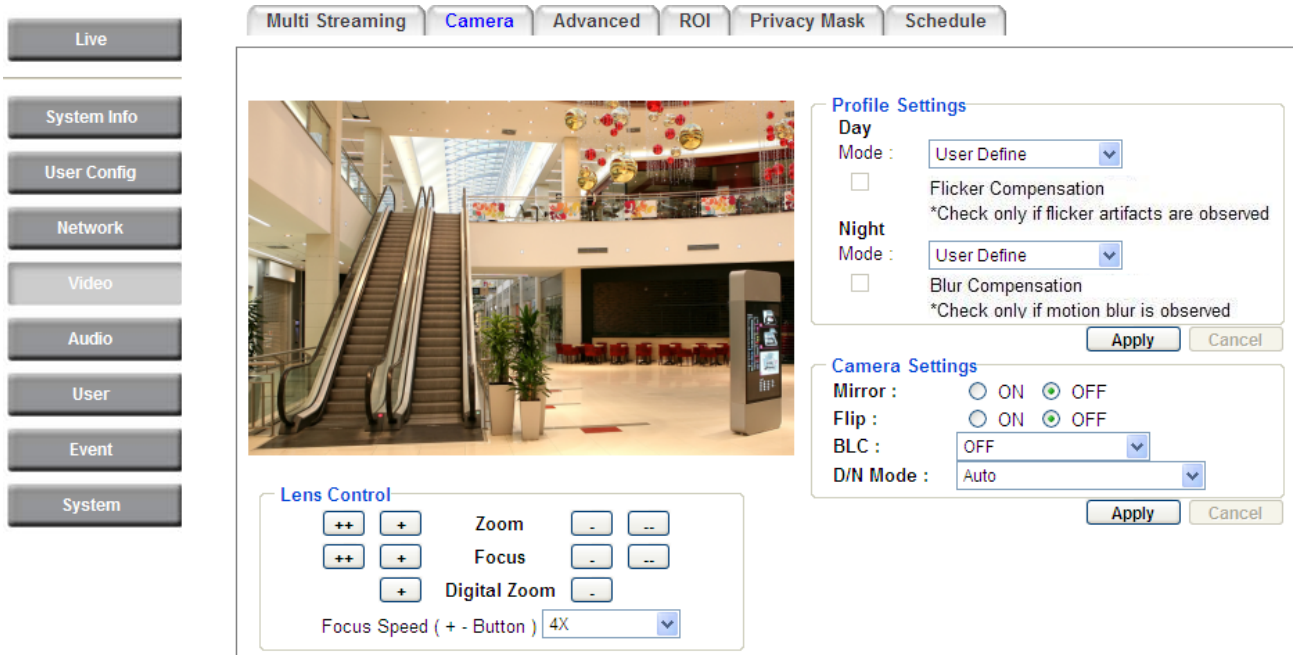
--: Click and hold the button to minus the value continuously.

+: Click the button to add the value one step forward.

-: Click the button to minus the value one step backward.

Focus Speed: Select between 1X and 4X and then click the Focus buttons (step forward / backward) to change the focus speed.

EZN3340:



【**Profile Settings**】 The Profile Setting is designed with four camera modes (Vivid/High Contrast, Standard, More Detail and User Define), which can be applied in various scenes to enhanced image quality. You can apply different camera modes to the daytime and night time.

Day Mode: Select a camera mode and then click the **Apply** button to save the settings.

- **Vivid:** Select Vivid mode to have images with optimized contrast ratio. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **Standard:** Select Standard mode to have images with system configured settings. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **More Detail:** Select More Detail mode to enhance the dark parts of the images. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **User Define:** Select User Define mode to customize the camera settings. You can configure all the camera settings on the Advanced setup page.

Flicker Compensation: Check the box to enable the Flicker Compensation function. Please enable this function only if flicker artifacts are observed.

Night Mode: Select a camera mode and then click the **Apply** button to save the settings.

- **High Contrast:** Select High Contrast mode to have images with higher contrast ratio. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **Standard:** Select Standard mode to have images with system configured settings. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **More Detail:** Select More Detail mode to enhance the dark parts of the images. You can further configure the camera settings on the Advanced setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Advanced setup page such as **Exposure Settings (AE)**, **Noise Reduction Settings** and **Monitor Settings**.
- **User Define:** Select User Define mode to customize the camera settings. You can configure all the camera settings on the Advanced setup page.

Blur Compensation: Check the box to enable the Blur Compensation function. Please enable this function only if motion blur is observed.

【Camera Settings】

Mirror: Switch Mirror ON to rotate the image horizontally around a vertical axis.

Flip: Switch Flip ON to rotate the image vertically around a horizontal axis.

BLC: Back Light Compensation (BLC) is used to make the subject appear clearer when it is set against a bright background.

- **OFF:** Select to switch Back Light Compensation functions off.
- **Back Light:** The Back Light function is useful when the background of the subject is very bright and the subject itself is dark. Select Back Light and adjust the slide bar to the left / right for setting up the back light value. The higher the value, the more the backlight compensation.
- **Front Light:** This function is useful when the bright highlights, such as flashlight or car headlights, appear on the camera view. Select Front Light and adjust the slide bar to the left / right for setting up the front light value. The higher the value, the more the highlight compensation.

D/N Mode

- **Auto**: Select to let the camera automatically switch to Night mode (black and white images with IR LED on) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.
- **Day**: Select to keep the camera in Day mode (color images with IR LED off), even in nighttime.
- **Night**: Select to keep the camera in Night mode (black and white images with IR LED on), even in daytime.

- **Schedule**: Select to let the camera to switch to Day mode or Night mode (IR LED on) based on the day and night schedule settings. To configure the daytime / nighttime of each day, please refer to *7.4.6 Schedule*.
- **Auto mode without IR LED:** Select to let the camera automatically switch to Night mode (black and white images with IR LED off) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.
- **Night mode without IR LED:** Select to keep the camera in Night mode (black and white images with IR LED off), even in daytime.
- **Schedule without IR LED:** Select to let the camera to switch to Day mode or Night mode (IR LED off) based on the day and night schedule settings. To configure the daytime / nighttime of each day, please refer to *7.4.6 Schedule*.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

【Lens Control】 Set the Zoom, Focus and Digital Zoom actions of your camera.

++: Click and hold the button to add the value continuously.

--: Click and hold the button to minus the value continuously.

+: Click the button to add the value one step forward.

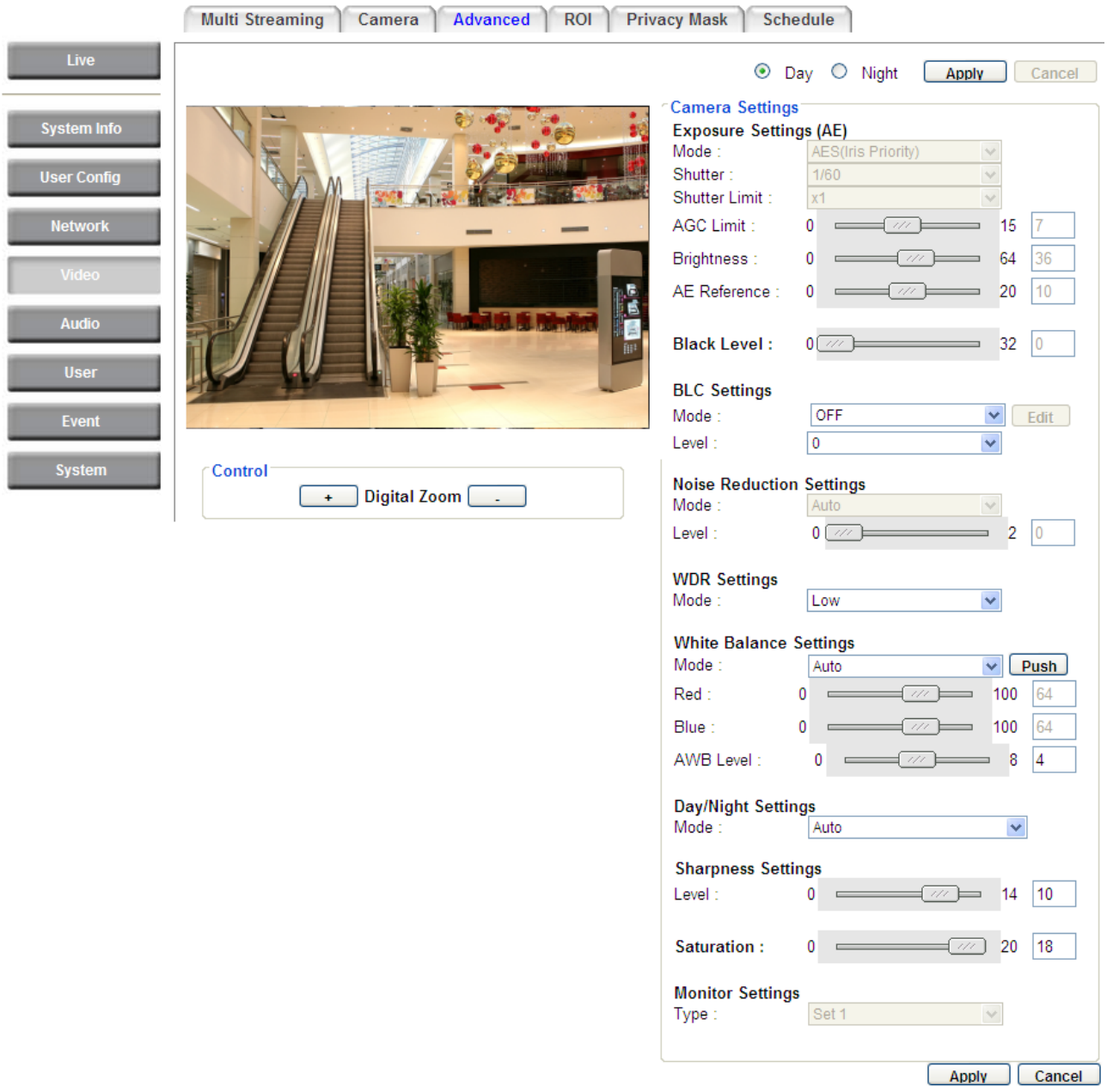
-: Click the button to minus the value one step backward.

Focus Speed: Select between 1X and 4X and then click the Focus buttons (step forward / backward) to change the focus speed.

7.4.3 Advanced

You can further set up camera settings on this page.

EZN3160:



【**Control**】The camera features 10x digital zoom. Click the + or - button to zoom in or zoom out the image.

Day: Select **Day** to set up the following settings for daytime and then click the **Apply** button to save the settings.

Night: Select **Night** to set up the following settings for nighttime and then click the **Apply** button to save the settings.

【Camera Settings】

Exposure Settings (AE): This setting is used to adapt to the amount or type of light used by the camera. The options vary among models.

Mode:

- **ALC(Shutter Priority):** Selecting ALC (Automatic Light Control) allows the camera circuitry to either take bright spots more into consideration (peak), bringing out detail in bright areas, or less into consideration (average) bringing out detail in shadows.
- **AES(Iris Priority):** Selecting AES (Auto Electronic Shutter) disables the Shutter setting below this setting. In this mode, the camera measures the light level and decides whether it needs more or less light and then automatically adjusts the shutter speed accordingly.

Shutter: If enabled, this setting lets you set the shutter speed yourself (measured in fractions of a second).

Shutter Limit: Set the Shutter limit here.

AGC Limit: Set the Auto Gain Control limit here. The lower the AGC level, the lower the video signal and the noise. However, the image will be darker under low-light condition with IR-off if you set up the Iris to the maximum level.

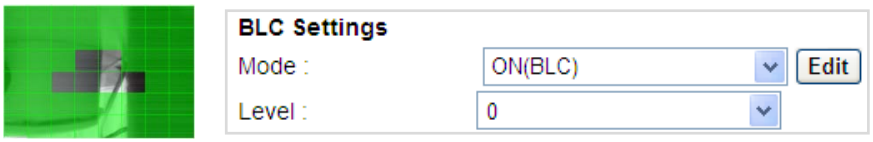
Brightness: Set the image brightness here.

AE Reference: Set the Auto Exposure value here.

Black Level: Set the Black level here.

BLC Settings: Back Light Compensation (BLC) is used to make the subject appear clearer when it is set against a bright background. The options vary among models.

- **OFF:** Select to switch Back Light Compensation functions off.
- **ON (BLC):** This option is useful when the background of the subject is very bright and the subject itself is dark. The BLC will measure the light of the image center and the lens iris will automatically set for optimal image quality.
  Select **ON (BLC)**, the Edit button next to the Mode drop-down list will be active (see image below). Click the Edit button, the green setup areas appear on the left screen. Click on the areas to enable / disable the BLC function. The selected areas (in green) will be applied with the BLC function.



- **ON (HLC)**: This option is only available when you select AES Mode in the Exposure Settings (AE) field. This function is useful when the bright highlights, such as flashlight or car headlights, appear on the camera view. The higher the value, the more the highlight compensation.
  Select **ON (HLC)**, and then select a level from the drop-down list. The higher the level, the more the highlight compensation.

Noise Reduction Settings: This limits the amount of digital "video noise" that is usually found in any video stream, and helps to reduce file size. The higher the level, the more the reduction.

Select **ON / OFF** to enable / disable the Noise Reduction function. Or select **Auto** to let the camera automatically enable / disable the Noise Reduction function. Slide the Level bar to set up the level. The higher the level, the more the reduction.

WDR: The **Wide Dynamic Range (WDR)** function provides clearer images when both of the very bright and dark areas simultaneously appear on the camera view. There are four value options: OFF, Low, Middle and High. Note that when WDR is ON, some parts of the image may appear solarized. This is normal for WDR, and is not a camera malfunction.

White Balance Settings: Select the mode that delivers the best quality image for the camera's light environment. There are five options: Auto, Manual, Indoor, Outdoor, One Push.

- **Auto:** Select to let the camera automatically adjust the White Balance. In the Auto mode the camera computes the white balance value output using color information from the entire screen. It outputs the proper value using the color temperature radiating from a black subject based on a range of value from 3000 to 7500K.
- **Manual:** Select to adjust the Red and Blue values yourself in the fields below this field.
- **Indoor:** Select to use the default settings for indoor environments.
- **Outdoor:** Select to use the default settings for outdoor environments.
- **One Push:** Select to enable the **Push** button

next to the Mode drop-down field. This will allow you to force the camera to readjust the white balance every time you push the **Push** button. The lens will hold the same focal position until the next trigger command is received. This function helps to prevent incorrect focusing in dark environments.

Day/Night Settings:

- **Auto**: Select to let the camera automatically switch to Night mode (black and white images with IR LED on) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.
- **Day**: Select to keep the camera in Day mode (color images with IR LED off), even in nighttime.
- **Night**: Select to keep the camera in Night mode (black and white images with IR LED on), even in daytime.
- **Schedule**: Select to let the camera to switch to Day mode or Night mode (IR LED on) based on the day and night schedule settings. To configure the daytime / nighttime of each day, please refer to *7.4.6 Schedule*.
- **Auto mode without IR LED:** Select to let the camera automatically switch to Night mode (black and white images with IR LED off) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.

- **Night mode without IR LED:** Select to keep the camera in Night mode (black and white images with IR LED off), even in daytime.
- **Schedule without IR LED:** Select to let the camera to switch to Day mode or Night mode (IR LED off) based on the day and night schedule settings. To configure the daytime / nighttime of each day, please refer to *7.4.6 Schedule*.

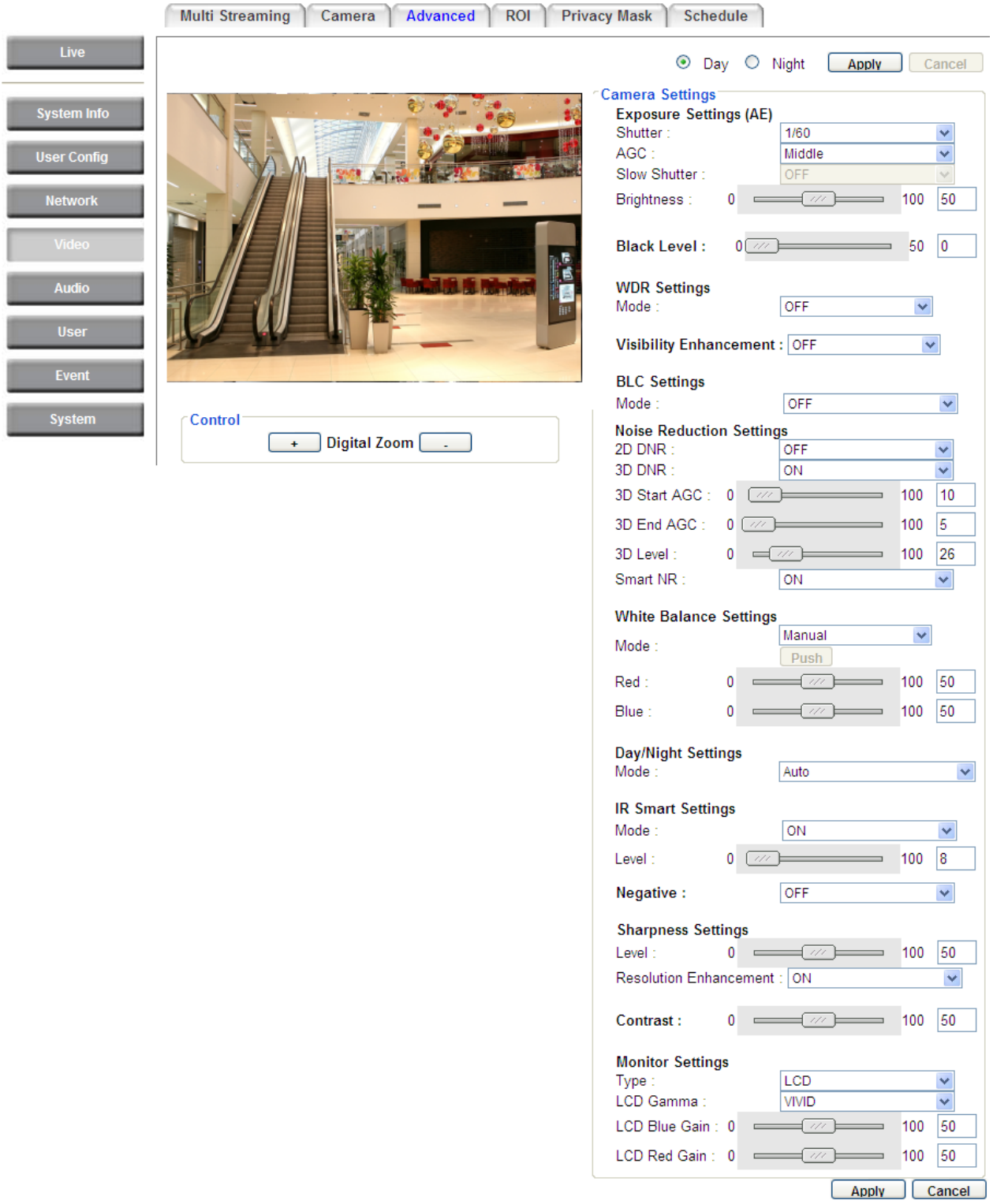
Sharpness Settings: Select the sharpness level of the image. A low sharpness level will deliver a softer, less detailed image. A high level will deliver a sharp, highly detailed image. Switch Resolution Enhancement ON to enable the resolution enhancement function.

Saturation: Set the saturation value.

Monitor Settings: The user can use this field to optimize video quality for specific type of monitor – LCD or CRT.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

EZN3260:



【**Control**】The camera features 10x digital zoom. Click the + or - button to zoom in or zoom out the image.

Day: Select **Day** to set up the following settings for daytime and then click the **Apply** button to save the settings.

Night: Select **Night** to set up the following settings for nighttime and then click the **Apply** button to save the settings.

【Camera Settings】

Exposure Settings (AE): This setting is used to adapt to the amount or type of light used by the camera.

Shutter: If enabled, this setting lets you set the shutter speed yourself (measured in fractions of a second).

AGC: Set the Auto Gain Control limit here. The lower the AGC level, the lower the video signal and the noise. However, the image will be darker under low-light condition with IR-off if you set up the Iris to the maximum level.

Slow Shutter: This option can be switched on when Auto or 1/30 option is selected in the Shutter field.

Brightness: Set the image brightness here.

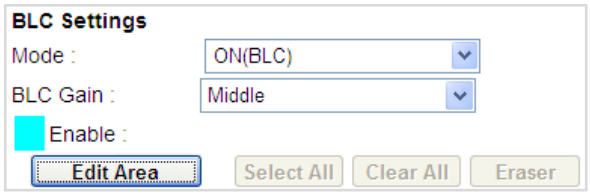
Black Level: Set the Black level here.

WDR Settings: The **Wide Dynamic Range (WDR)** function provides clearer images when both of the very bright and dark areas simultaneously appear on the camera view. There are four value options: OFF, Low, Middle and High. Note that when WDR is ON, some parts of the image may appear solarized. This is normal for WDR, and is not a camera malfunction.

Visibility Enhancement: (OFF/Low/Middle/High) Images in foggy or rain environments or in environments with a very strong luminous intensity have a dynamic range that is significantly lower than ordinary images. The user can use this Visibility Enhancement setting to “DEFOG” the image if such “FOGGING” is an issue.

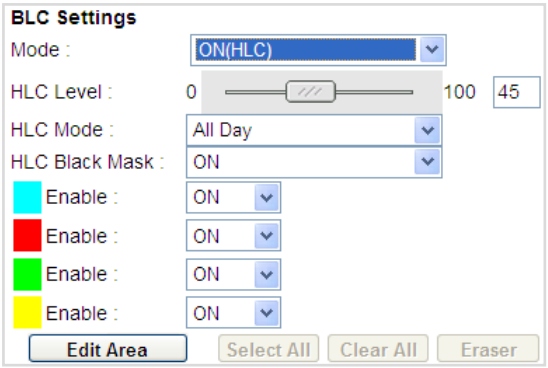
BLC Settings: Back Light Compensation (BLC) is used to make the subject appear clearer when it is set against a bright background. The options vary among models.

- **OFF:** Select to switch Back Light Compensation functions off.
- **ON (BLC):** This option is useful when the background of the subject is very bright and the subject itself is dark. The BLC will measure the light of the image center and the lens iris will automatically set for optimal image quality.
  You can configure one area to apply the BLC function. Select **ON (BLC)**, the setup buttons appears (see image below). Select Low / Middle / High from the BLC Gain drop-down list. To set up a BLC area, click the **Edit Area** button and then click on the blue color tab to turn your mouse cursor into a blue pen. Move the cursor to the position on the right screen where you want the BLC rectangle to start and then click. Move your cursor to the position (diagonally opposing corner) where you want the BLC rectangle to end and then click. The blue area will be applied with the BLC function.



- **ON (HLC)**: This function is useful when the bright highlights, such as flashlight or car headlights, appear on the camera view. The higher the value, the more the highlight compensation.

  HLC Level: Select a level for the HLC setting. The higher the level, the more the highlight compensation.
  HLC Mode: Select All Day / Night mode to apply the HLC function.
  HLC Black Mask: Select On / Off to apply the black mask on the selected areas. The over-exposure portions within the selected areas will be applied with the black mask.
  Color Tabs: You can set up four HLC areas with different colors. To set up a HLC area, click the **Edit Area** button and then click on the color tab to turn your mouse cursor into a pen of that color. Move the cursor to the position on the right screen where you want the HLC rectangle to start and then click. Move your cursor to the position (diagonally opposing corner) where you want the HLC rectangle to end and then click. Select ON from the color tab drop-down list. The rectangular area with the selected color will be applied with the HLC function.



Noise Reduction Settings: This limits the amount of digital “video noise” that is usually found in any video stream, and helps to reduce file size. The higher the level, the more the reduction.

2D DNR: Select ON to enable the 2D DNR function.

3D DNR: Select ON to enable the 3D DNR function. You can further set up the following settings.

- **3D Start AGC:** Set up the AGC level to automatically start the 3D NR function.
- **3D End AGC:** Set up the AGC level to automatically stop the 3D NR function.
- **3D Level:** Set up the 3D DNR level.
- **Smart NR:** Select ON to enable the Smart NR function. The 3D NR function will be automatically turned on when a motion event occurs.

White Balance Settings: Select the mode that delivers the best quality image for the camera's light environment. There are five options: Auto, Manual, Indoor, Outdoor, One Push.

- **Auto:** Select to let the camera automatically adjust the White Balance. In the Auto mode the camera computes the white balance value output using color information from the entire screen. It outputs the proper value using the color temperature radiating from a black subject based on a range of value from 3000 to 7500K.
- **Manual:** Select to adjust the Red and Blue values yourself in the fields below this field.
- **Indoor:** Select to use the default settings for indoor environments.
- **Outdoor:** Select to use the default settings for outdoor environments.
- **One Push:** Select to enable the **Push** button Push next to the Mode drop-down field. This will allow you to force the camera to readjust the white balance every time you push the **Push** button. The lens will hold the same focal position until the next trigger command is received. This function helps to prevent incorrect focusing in dark environments.

Day/Night Settings:

- **Auto**: Select to let the camera automatically switch to Night mode (black and white images with IR LED on) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.
- **Day**: Select to keep the camera in Day mode (color images with IR LED off), even in nighttime.
- **Night**: Select to keep the camera in Night mode (black and white images with IR LED on), even in daytime.
- **Schedule**: Select to let the camera to switch to Day mode or Night mode (IR LED on) based on the day and night schedule settings. To configure the daytime / nighttime of each day, please refer to *7.4.6 Schedule*.
- **Auto mode without IR LED:** Select to let the camera automatically switch to Night mode (black and white images with IR LED off) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.
- **Night mode without IR LED:** Select to keep the camera in Night mode (black and white images with IR LED off), even in daytime.
- **Schedule without IR LED:** Select to let the camera to switch to Day mode or Night mode (IR LED off) based on the day and night schedule settings. To configure the daytime / nighttime of each day, please refer to *7.4.6 Schedule*.

IR Smart Settings: Select ON and set up the level to enhance the image quality when the images are over exposure. This function is useful when the camera is in the Night mode.

Negative: Switch this setting ON to view a color negative version of the video image. This is useful at night or when viewing temperature-sensitive images.

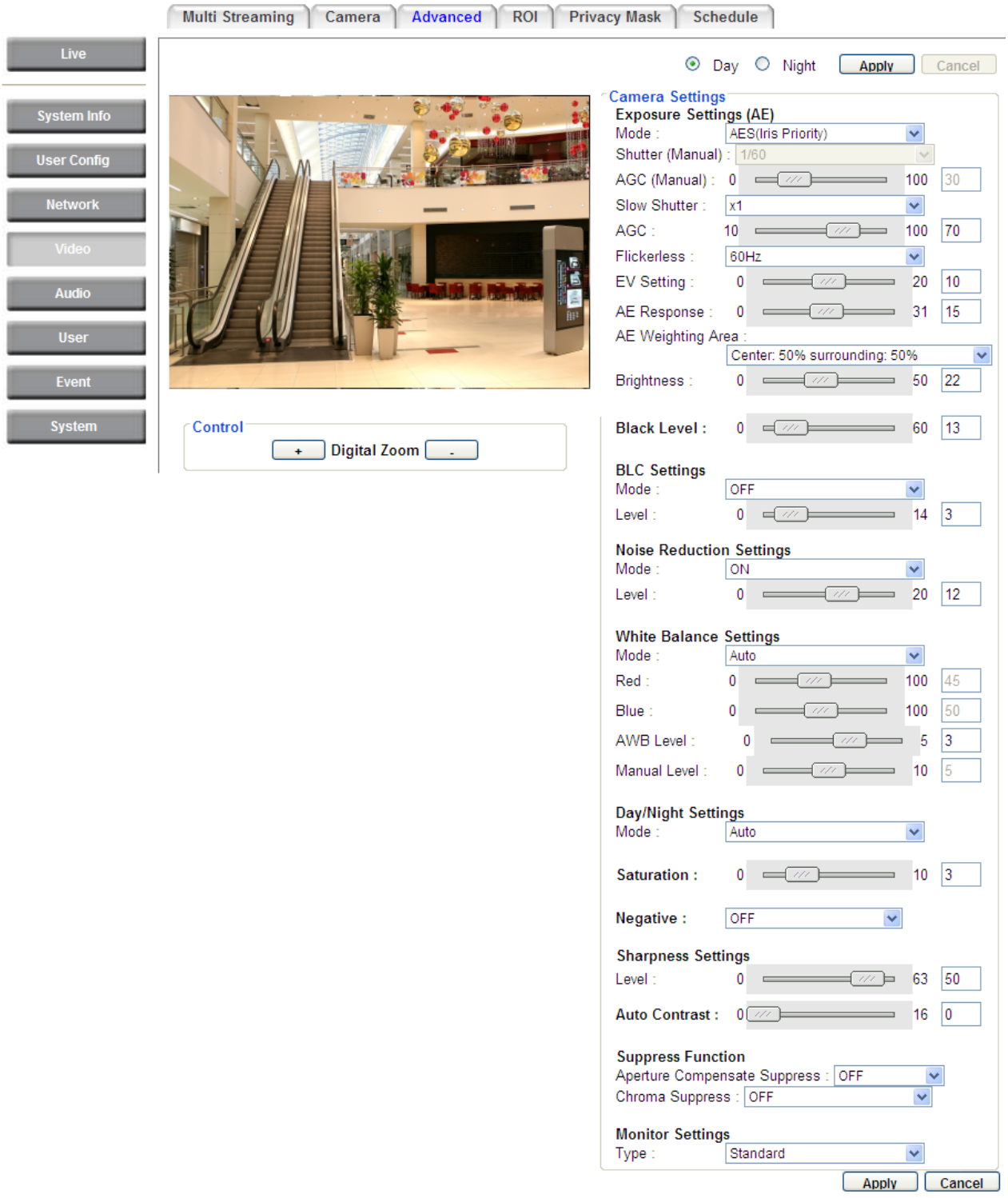
Sharpness Settings: Select the sharpness level of the image. A low sharpness level will deliver a softer, less detailed image. A high level will deliver a sharp, highly detailed image. Switch Resolution Enhancement ON to enable the resolution enhancement function.

Contrast: Select the contrast level of the image.

Monitor Settings: The user can use this field to optimize video quality for specific type of monitor – LCD or CRT.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

EZN3340:



【**Control**】The camera features 10x digital zoom. Click the + or - button to zoom in or zoom out the image.

Day: Select **Day** to set up the following settings for daytime and then click the **Apply** button to save the settings.

Night: Select **Night** to set up the following settings for nighttime and then click the **Apply** button to save the settings.

【Camera Settings】

Exposure Settings (AE): This setting is used to adapt to the amount or type of light used by the camera.

Mode:

- **ALC (Shutter Priority):** Selecting ALC (Automatic Light Control) allows the camera circuitry to either take bright spots more into consideration (peak), bringing out detail in bright areas, or less into consideration (average) bringing out detail in shadows.
- **AES (Iris Priority):** Selecting AES (Auto Electronic Shutter) disables the Shutter setting below this setting. In this mode, the camera measures the light level and decides whether it needs more or less light and then automatically adjusts the shutter speed accordingly.
- **Manual:** Select this option to manually set up the Shutter (Manual) and AGC (Manual) values.

Shutter (Manual): If enabled, this setting lets you set the shutter speed yourself (measured in fractions of a second). This option can be switched on when ALC or Manual Mode is selected.

AGC (Manual): Set the Auto Gain Control limit here. The lower the AGC level, the lower the video signal and the noise. However, the image will be darker under low-light condition with IR-off if you set up the Iris to the maximum level. This option can be switched on when Manual Mode is selected.

Slow Shutter: This option can be switched on when AES Mode is selected in the Exposure Settings (AE) field.

AGC: Set the Auto Gain Control limit here. The lower the AGC level, the lower the video signal and the noise. However, the image will be darker under low-light condition with IR-off if you set up the Iris to the maximum level.

Flickerless: If the Mode field in the Exposure Settings (AE) area has been set to AES, then this option becomes available. Choose between OFF, 50HZ, 60HZ, 50HZ (High Luminance) or 60HZ (High Luminance).

EV Setting: Set up the Exposure Value. Note the brightness of the screen changes when you change the EV value.

AE Response: Set up the Auto Exposure Response time.

AE Weighting Area: Select an AE Weighting area. Each setup AE Weighting Area is configured with the appropriate brightness level on the center and the surrounding areas.

Brightness: Set the image brightness here.

Black Level: Set the Black level here.

BLC Settings: Back Light Compensation (BLC) is used to make the subject appear clearer when it is set against a bright background. The options vary among models.

- **OFF:** Select to switch Back Light Compensation functions off.
- **Back Light:** The Back Light function is useful when the background of the subject is very bright and the subject itself is dark. Select Back Light and adjust the slide bar to the left / right for setting up the back light value. The higher the value, the more the backlight compensation.
- **Front Light:** This function is useful when the bright highlights, such as flashlight or car headlights, appear on the camera view. Select Front Light and adjust the slide bar to the left / right for setting up the front light value. The higher the value, the more the highlight compensation.

Noise Reduction Settings: This limits the amount of digital "video noise" that is usually found in any video stream, and helps to reduce file size. The higher the level, the more the reduction. Select **ON / OFF** to enable / disable the Noise Reduction function. Or select **Auto** to let the camera automatically enable / disable the Noise Reduction function. Slide the Level bar to set up the level. The higher the level, the more the reduction.

White Balance Settings: Select the mode that delivers the best quality image for the camera's light environment. There are five options: Auto, Manual, Indoor, Outdoor, One Push.

- **Auto:** Select to let the camera automatically adjust the White Balance. In the Auto mode the camera computes the white balance value output using color information from the entire screen. It outputs the proper value using the color temperature radiating from a black subject based on a range of value from 3000 to 7500K.
- **Manual:** Select to adjust the Red and Blue values yourself in the fields below this field.
- **Indoor:** Select to use the default settings for indoor environments.
- **Outdoor:** Select to use the default settings for outdoor environments.
- **One Push:** Select to enable the **Push** button Push next to the Mode drop-down field. This will allow you to force the camera to readjust the white balance every time you push the **Push** button. The lens will hold the same focal position until the next trigger command is received. This function helps to prevent incorrect focusing in dark environments.

Day/Night Settings:

- **Auto**: Select to let the camera automatically switch to Night mode (black and white images with IR LED on) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.
- **Day**: Select to keep the camera in Day mode (color images with IR LED off), even in nighttime.
- **Night**: Select to keep the camera in Night mode (black and white images with IR LED on), even in daytime.

- **Schedule**: Select to let the camera to switch to Day mode or Night mode (IR LED on) based on the day and night schedule settings. To configure the daytime / nighttime of each day, please refer to *7.4.6 Schedule*.
- **Auto mode without IR LED:** Select to let the camera automatically switch to Night mode (black and white images with IR LED off) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.
- **Night mode without IR LED:** Select to keep the camera in Night mode (black and white images with IR LED off), even in daytime.
- **Schedule without IR LED:** Select to let the camera to switch to Day mode or Night mode (IR LED off) based on the day and night schedule settings. To configure the daytime / nighttime of each day, please refer to *7.4.6 Schedule*.

Saturation: Set the saturation value.

Negative: Switch this setting ON to view a color negative version of the video image. This is useful at night or when viewing temperature-sensitive images.

Sharpness Settings: Select the sharpness level of the image. A low sharpness level will deliver a softer, less detailed image. A high level will deliver a sharp, highly detailed image. Switch Resolution Enhancement ON to enable the resolution enhancement function.

Auto Contrast: Select the contrast level of the image.

Suppress Function:

Aperture Compensation Suppression: (OFF/Low/Middle/High) This setting can be activated to suppress luminance noise when the AGC level increases.

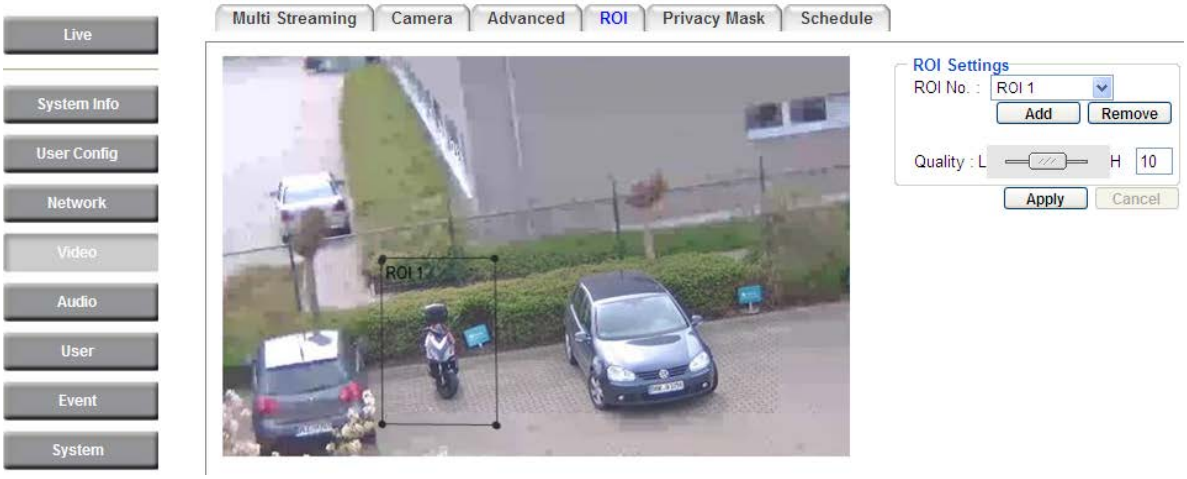
Chroma Suppression: (OFF/Low/Middle/High) This setting can be activated to suppress chrominance noise when the AGC level increases.

Monitor Settings: The user can use this field to optimize video quality for specific type of monitor – LCD or CRT.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.4.4 ROI (Region of Interest)

The Region of Interest (ROI) function allows users to set up multiple regions within an image with better quality and less distortion than the rest of the image. You can also use this function together with the Digital Zoom function on the Live View Page to get a better image result. Up to eight ROIs can be configured in the ROI settings page.

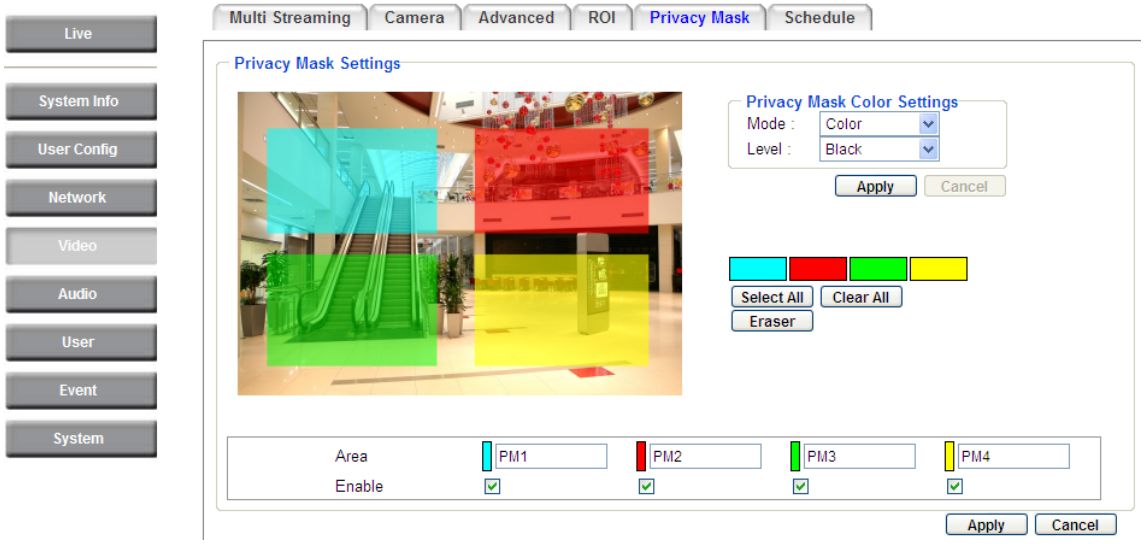


To set up an ROI region:

1. Select an ROI number from the ROI No. drop-down list.
2. Click the **Add** button, the mouse cursor will turn into a pen when you move it over the live image on the left.
3. Move the cursor to the position where you want the ROI rectangle to start and then click. Move the cursor to the position (diagonally opposing corner) where you want the ROI rectangle to end and then click.
4. Slide the Quality bar to set up the quality value.
5. Click the **Apply** button to apply the settings, or click the **Cancel** button to reset without saving the settings.

7.4.5 Privacy Mask

The Privacy Mask can block out sensitive areas from view, covering the areas with colored or black and white boxes in both live view and recorded clips. This feature is useful when users' don't want the sensitive information visible. Up to four Privacy Masks can be configured.



【**Privacy Mask Color Settings**】The Modes vary among camera models.

Mode: Click **Color** to make the masks appear as colored rectangles on the screen. Click **B/W** to make the masks appear as gray rectangles on the screen. Click **Mosaic** to make the masks appear as mosaic-effect rectangles on the screen.

Level: Select the color of the masks if you selected Color Mode. Select the level of grayness of the masks if you selected B/W Mode. Select the level of small/middle/large if you selected Mosaic Mode.

Color Tabs : Click on a color tab to turn your mouse cursor into a pen of that color. You can now create a block of that color on the video screen. Move your cursor to the position where you want your mask rectangle to start and then click. Move your cursor to the position (diagonally opposing corner) where you want your mask rectangle to end and then click. The rectangular area with the selected color will appear. The live image will display the rectangular area with the color you selected. If you want to create another mask, use one of the other three colors. Each color denotes a different mask area. Only one block per color is allowed. As the number of colors suggests, you can configure up to four blocks.

Select All: Click to turn the whole screen into a mask area.

Clear All: Click to delete all configured mask blocks.

Eraser: Click to turn the mouse cursor into an eraser to delete any block you click on.

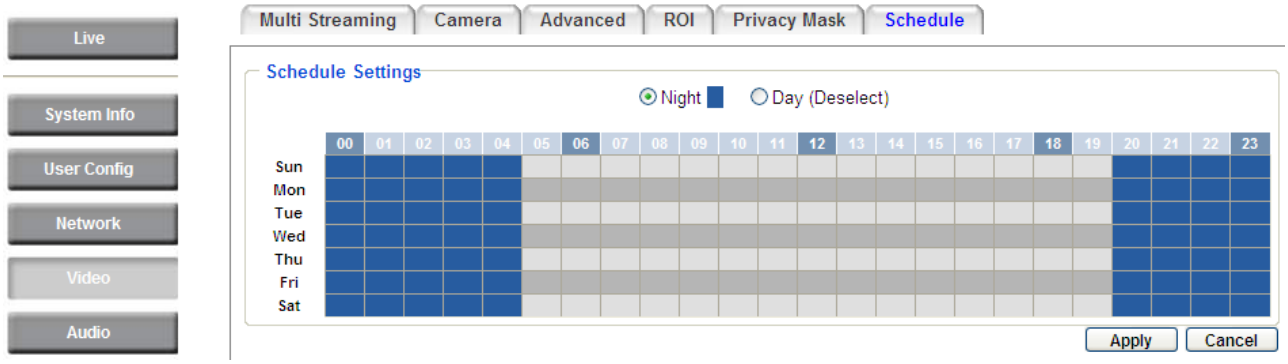
Area: Shows the color and number of the block.

Enable: Check this box to enable the related mask block.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.4.6 Schedule

The Schedule setup page is designed for users to configure the daytime and nighttime of each day. The Schedule setting is only functional if you select **Schedule** or **Schedule without IR LED** from the D/N Mode drop-down list on the Camera setup page.

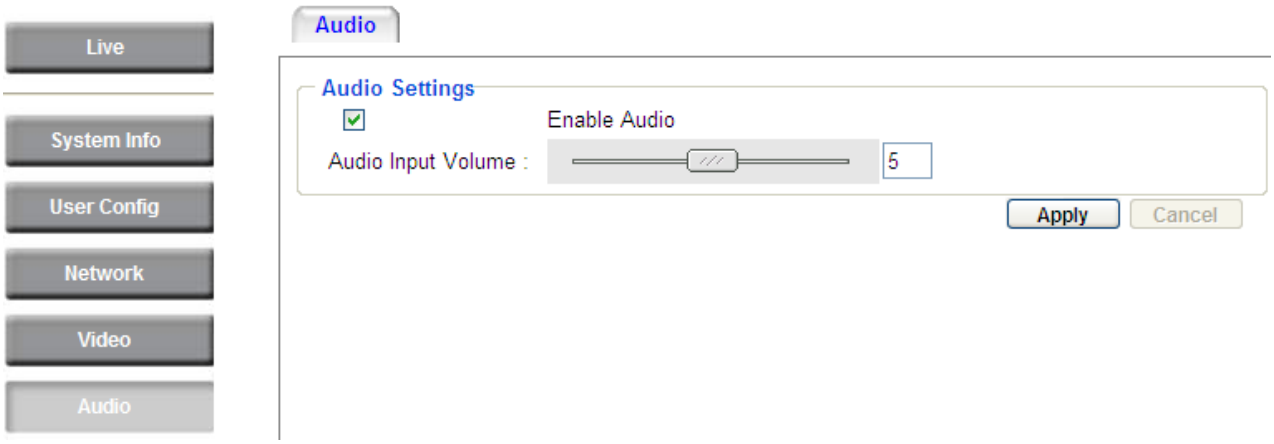


Select **Night** and then move the cursor on the desired time square, click and drag the cursor over the time squares to configure them to the Night mode (blue color). Select **Day** and then move the cursor on the desired time square, click on the time squares to configure them to the Day mode (gray color).

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.5 Audio

The EZN series IP camera can transmit audio to your computer if you have connected an external microphone to its audio Input cable. It can also receive audio input from you and transmit it via an external speaker, if you have connected such a speaker to its audio Output cable.



Check the Enable Audio box to enable the camera's audio function. The camera will now act as a digital bridge (via the IP network) between any connected audio input device and any connected audio device.

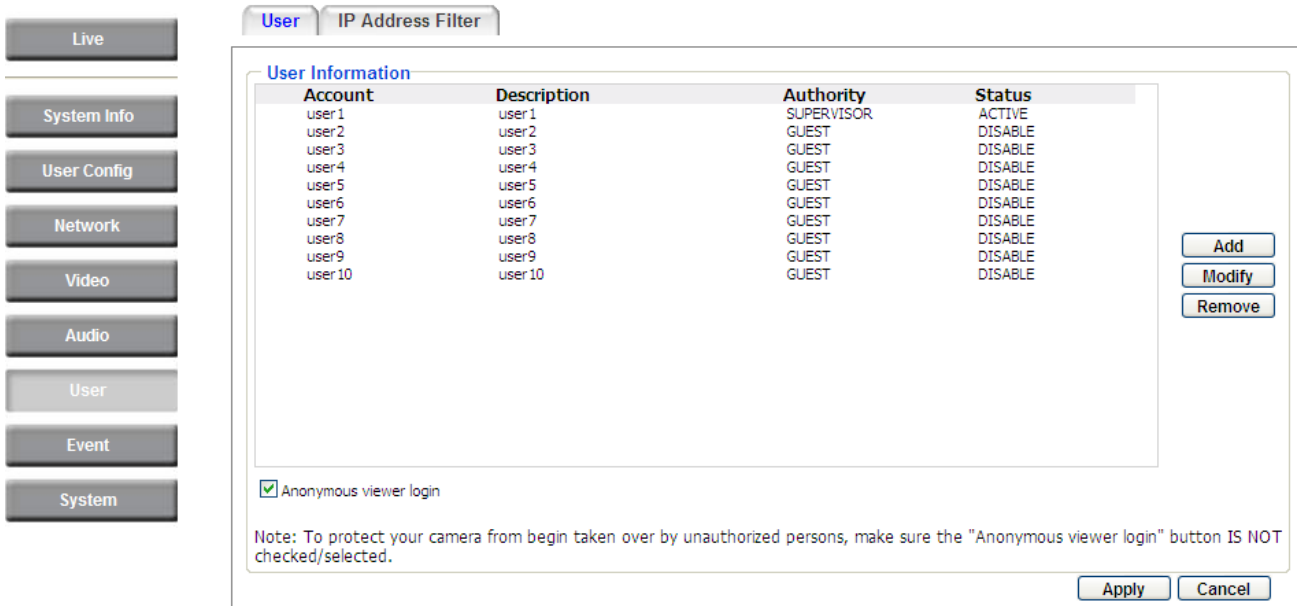
Adjust the Audio Input Volume if you have external audio input devices (microphones) connected to the camera and if there are problems with the sound input being too low or high.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.6 User

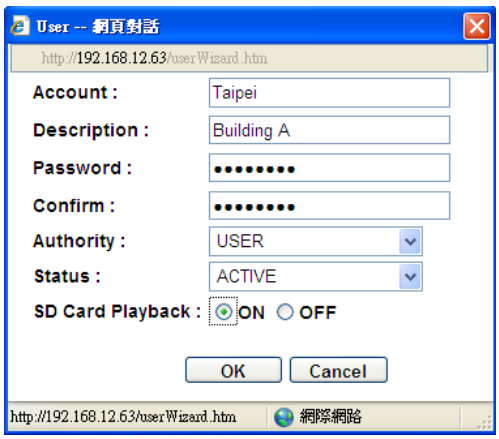
7.6.1 User Information

The system administrator can create up to ten user accounts on this page.



To set up a user account:

1. Highlight a user account and click the **Modify** button. The following dialog box appears.



2. Type the account name, account description and password for the account. Type the password again in the Confirm field.
3. Select an authority level for the user account from the Authority drop-down list.
   - **Supervisor / Administrator:** The only difference between a supervisor and administrator is that a supervisor can edit an administrator's account and password, but an administrator cannot edit the supervisor's account and password. Multiple administrators can be configured, but there can be only one supervisor. The supervisor and administrators all have unrestricted access to the Settings submenus and can determine the registration of all other users.

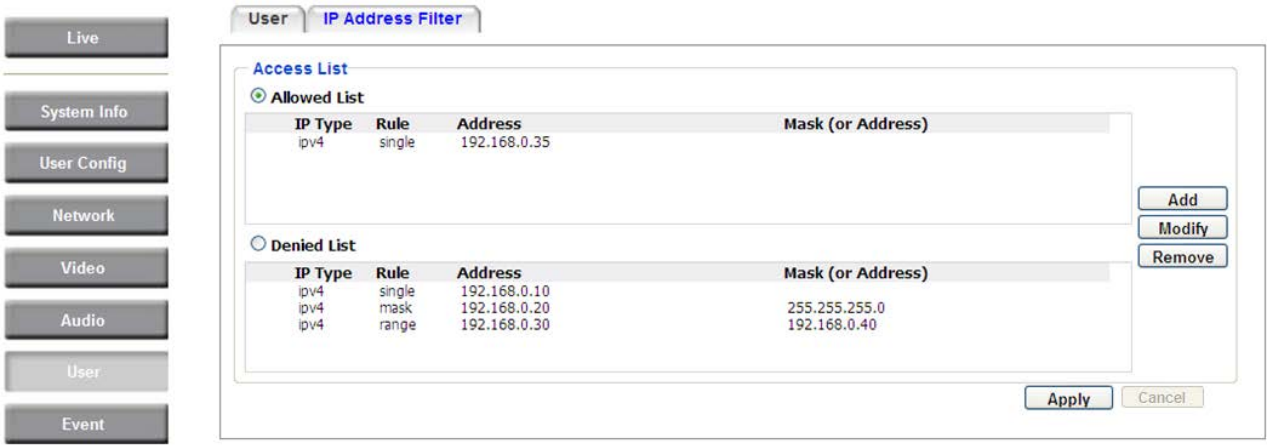
- **User:** A user can view the Live View page and view the system, network, video, and audio information. A user can only adjust the User Config page settings. The user does not have access to the User, Event and System pages.
- **Guest:** The lowest level of access, which only allows the user access to the Live View page.

4. Select **Active** or **Disable** from the Status drop-down list to active or disable the user account.
5. Click **On** in the SD Card Playback field to allow the user to access the SD card playback function.
6. Click **OK**.
7. Click **Apply** to save all the settings.

7.6.2 IP Address Filter

Use this page to specify IP addresses that are not allowed to access this camera. By default, any IP address can access the camera.

Note: The Allowed List addresses only become relevant when the Denied List contains a network or range, and the supervisor wants to allow one or more IP addresses within that excluded range or network. In such a scenario, the user would enter the excluded range or network in the Denied List, and enter the exceptions in the Allowed List.



To set up the IP Address Filter:

1. Select Denied List. Click the **Add** button, the following dialog box appears.

2. Select an IP type from the IP Type drop-down list.
3. Select a network rule from the Rule drop-down list, type the IP address and click **OK**.

   Single: Type a single IP address in the IP Address field below.

   Network: Type the IP address and subnet mask in the field below.

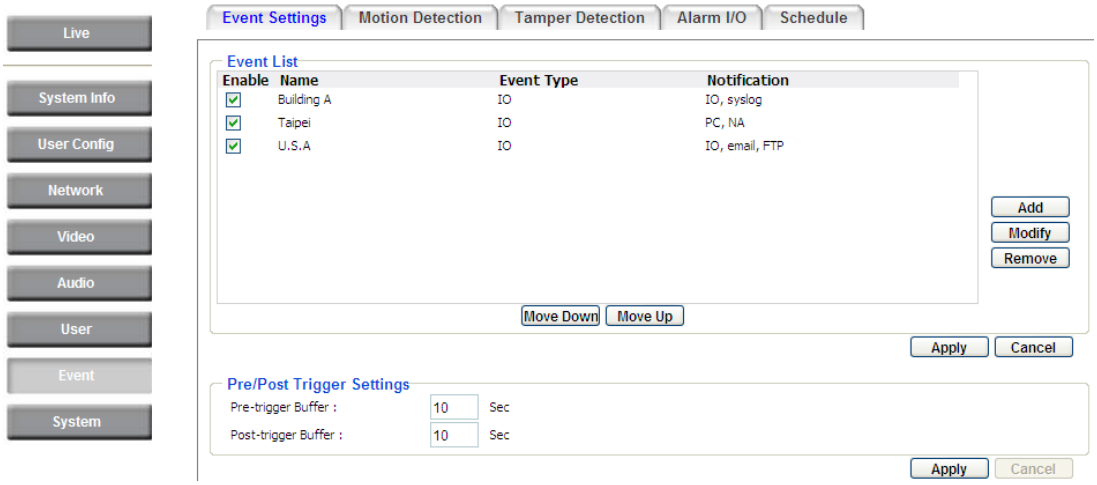
   Range: Type a range for the IP addresses.
4. If you have set up an IP range in **Step 3**, you can optionally set up the Allowed List to allow one or more IP addresses within the setup IP range to access the IP camera.
5. Click **Apply**.

7.7 Event

You can set up the Motion Detection event, Tamper Detection event or the Alarm I/O to automatically notify the users when an event occurs or an alarm is triggered. You can also set up a schedule to automatically record the videos when an event occurs or an alarm is triggered.

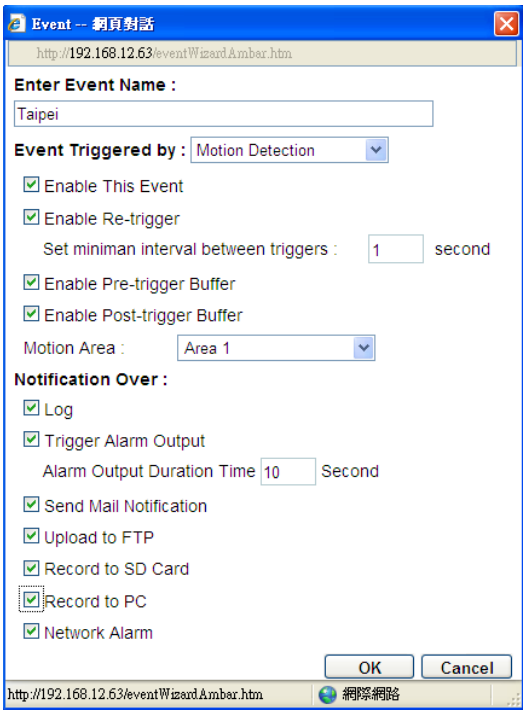
7.7.1 Event Settings

You can create a total of ten event or alarm settings page in the Event List



【Event List】

Click the **Add** button, and the following Event Configuration Window appears.



Enter Event Name: Type an event name.

Event Triggered by: Select an event or alarm type for the to-be-specified-below reaction/s.

Alarm Input: Select this if you want a reaction trigger coming from any external, connected sensor to activate a to-be-specified-below reaction/s via the camera system. Make sure that a suitable device is actually connected to the alarm input relay.

Manual Trigger: Select this option if you want to manually trigger the alarm by clicking the **Trigger Event** button on the Live View Page.

Motion Detection: Select this option if you want motion in a specified part of the camera's viewing rectangle (the screen image) to trigger the to-be-specified-below reaction/s.

Tampering Detection: Select this option if you want the camera's tampering detection sensor to trigger the to-be-specified-below reaction/s.

Schedule Recording: Select this option if you want the Schedule Recording periods configured in the recording schedule (the Settings > Event > Schedule page) to activate this event. In this scenario, a preconfigured event reaction like a log entry will list the start and end times of each period. Actual recording will only be triggered if the event is preconfigured to do so.

- **Enable This Event**: Select to activate the event.
- **Enable Re-trigger:** Click to set a minimum time after the event is triggered before the event can be triggered again.
- **Enable Pre-trigger Buffer:** Click if you want the Event reaction (as selected in the "Notification Over" field below) to be the activation of the video recording function, and if you want the recording to include the video feed from the time period (configurable on the previous "Event Settings" page) just before the Event trigger occurred.
- **Enable Post-trigger Buffer:** Click if you want the Event reaction (as selected in the Notification Over field) to be the activation of the video recording function, and if you want the recording to include the video feed from a time period (configurable on the Event Settings page) just after the Event trigger occurred.
- **Motion Area:** Select a setup motion detection area from the drop down list. Note this function only becomes relevant after the Motion Detection areas have been set up (see *7.7.2 Motion Detection*).

Notification Over: Select the desired notification types form the following items.

- **Log:** Click if you want the camera to list the event's details in its log if the event is triggered.
- **Trigger Alarm Output:** Click if you want the camera to relay the event reaction to a device attached to the alarm relay output wire and then set up the alarm output duration time.

- **Send Mail Notification:** Click if you want the camera to send an email text notification and one image file to the email address entered in the Set SMTP Server(email) field of the Network > SMTP/FTP page, if the Event occurs (see *7.3.3 SMTP / FTP*).
- **Upload to FTP:** Click if you want the camera to upload the recordings to the FTP server entered in the Set SMTP Server(email) field of the Network > SMTP/FTP page, if the Event occurs (see *7.3.3 SMTP / FTP*).
- **Record to SD Card:** Click if you want the camera to start recording its video feed (when the event occurs) on an on-camera SD Card (if such a card has been inserted).

Note: The recording will only be as long as the combined Pre- and Post-trigger Buffers, so make sure you enable at least one of these buffers, especially the Post-trigger Buffer.

- **Record to PC:** Check this box if you want the camera to start recording its video feed (when the event occurs) on the same folder on the same PC as configured on the User Config > Recording/Snapshot page (if such a folder has been enabled and configured).

Note: The recording will only be as long as the combined Pre- and Post-trigger Buffers (and for as long as the event trigger is happening – e.g. a motion is detected), so make sure you enable at least one of these buffers, especially the Post-trigger Buffer.

- **Network Alarm:** Check this box if you want the camera to send a network alarm signal (when the event occurs) to the CMS servers configured on the Network > Network Alarm page (see *7.3.6 Network Alarm*).

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

【Pre/Post Trigger Settings】

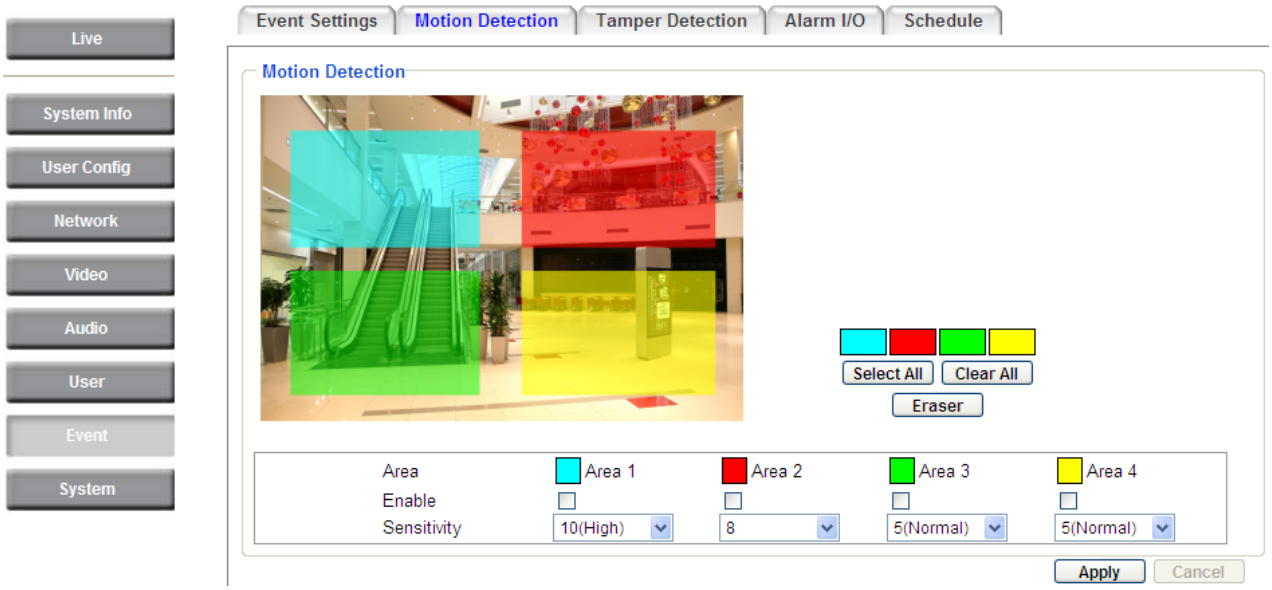
Pre-trigger Buffer: Select the duration for the buffer. This will determine the amount of footage (length of time) before the event trigger moment that will be included in an event-triggered video recording, if that buffer and video recording has been enabled in the Event Configuration Window.

Post-trigger Buffer: Select the duration for the buffer. This will determine the amount of footage (length of time) after the event trigger moment that will be included in an event-triggered video recording, if that buffer and video recording has been enabled in the Event Configuration Window.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.7.2 Motion Detection

Use this page to configure up to four areas in which motion will be detected. When a motion is detected by the camera, the motion detection icon will appear at the top right of the Live page to alert the user. This function can also be linked with correctly configured Events to trigger Event reactions like the activation of video recording periods, snapshots, alarms, etc.



Color Tabs : Click on a color tab to turn your mouse cursor into a pen of that color. You can now create a block of that color on the video screen. Move your cursor to the position where you want your detection rectangle to start and then click. Move your cursor to the position (diagonally opposing corner) where you want your detection rectangle to end and then click. The rectangular area with the selected color will appear. This block will be an area inside which the camera will detect motion. If you want to create another detection area, use one of the other three palette colors. Each color denotes a different detection area. Only one block per color is allowed. As the number of colors suggests, you can configure up to four blocks.

Select All: Click to turn the whole screen into a motion detection area.

Clear All: Click to delete all configured motion detection blocks.

Eraser: Click to turn your mouse cursor into an eraser to delete any block you click on.

Area: Shows the color and number/ID of the block.

Enable: Check this box to enable the related motion detection block.

Sensitivity: Set the sensitivity of the motion detection sensor function.

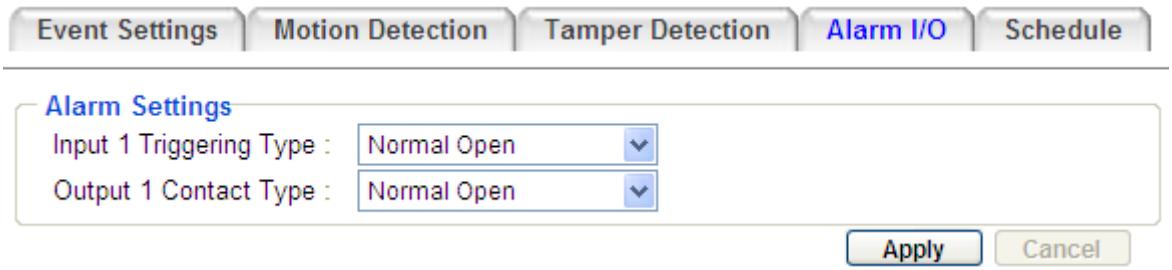
Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

7.7.3 Tamper Detection

Use this page to set the number of seconds that an alarm signal will be active if the device is physically tampered (moved, covered up, or out of focus.

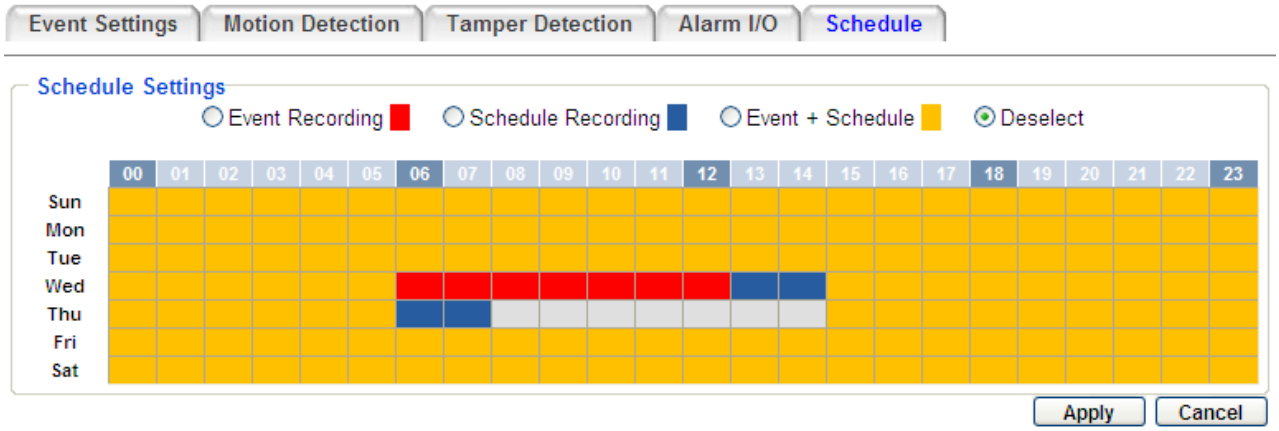
7.7.4 Alarm I/O

Use this page to set the type of trigger input and the type of output contact for each of the camera's two configurable alarm channels.



7.7.5 Schedule

Use this page to configure a schedule for periods during which the camera should deactivate all user-activated Events (gray Deselect periods), or when the camera should deactivate all user-activated Events, except Schedule Recording (SR) events (blue Schedule Recording-only periods), or when the camera should deactivate only SR events (red Event Recording-only periods), or when it should enable all activated Events (yellow periods).



Event Recording: Click this button to make every hour block you click on red. A red block represents an Event Recording-only block, which represents an hour when the camera will deactivate all preconfigured, activated Schedule Recording events and keep all the other activated events active.

Schedule Recording: Click this button to make every hour block you click on blue. A blue block represents a Schedule Recording-only block, which represents an hour when the camera will deactivate all other preconfigured, activated events and keep only the preconfigured, activated Schedule Recording events active.

Event + Schedule: Click this button to make every hour block you click on yellow. A yellow block represents an hour in which all activated events, including Schedule Recording events, will be active.

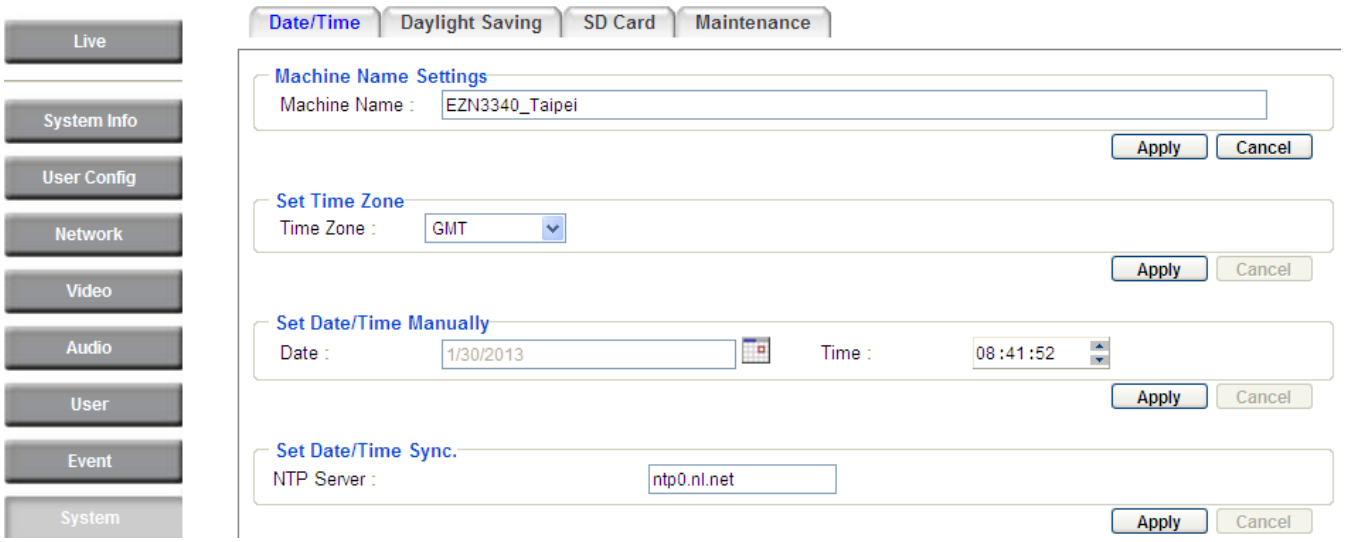
Deselect: Click this button to make every hour block become grey. A grey block represents an hour in which **all** activated events, including Schedule Recording events, will be **inactive**.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

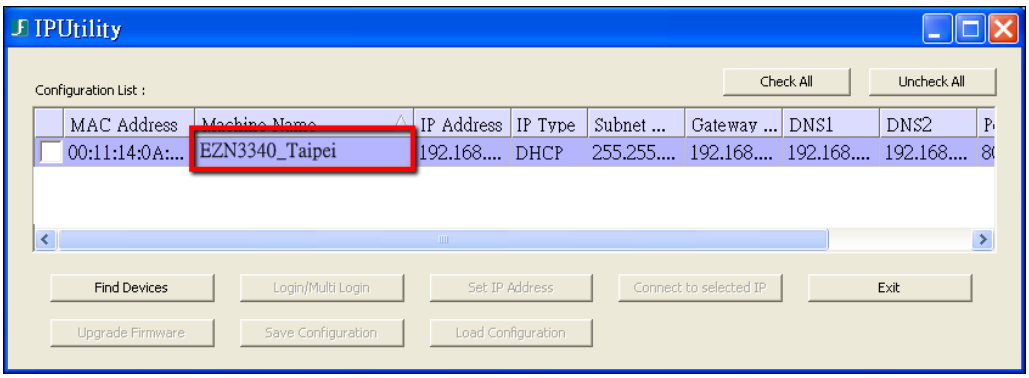
7.8 System

You can set up the system's time and SD card settings, and to do maintenance and reset actions like reboots and upgrades.

7.8.1 Date/Time



【**Machine Name Settings**】If required, enter a new name for the machine. This name will be visible in the Machine Name field of the IP Utility software, which is included in the software CD.



【**Set Time Zone**】Set the time zone of the camera's location.

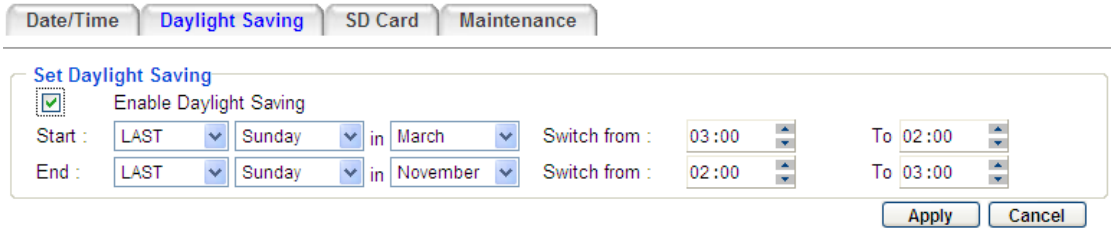
【**Set Date/Time Manually**】Set the date/time here if you won't be using an NTP server to update the date/time (see below).

【**Set Date/Time Sync.**】Enter the Network Time Protocol server, if applicable. The camera's time will be automatically adjusted by synchronizing with the NTP server.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

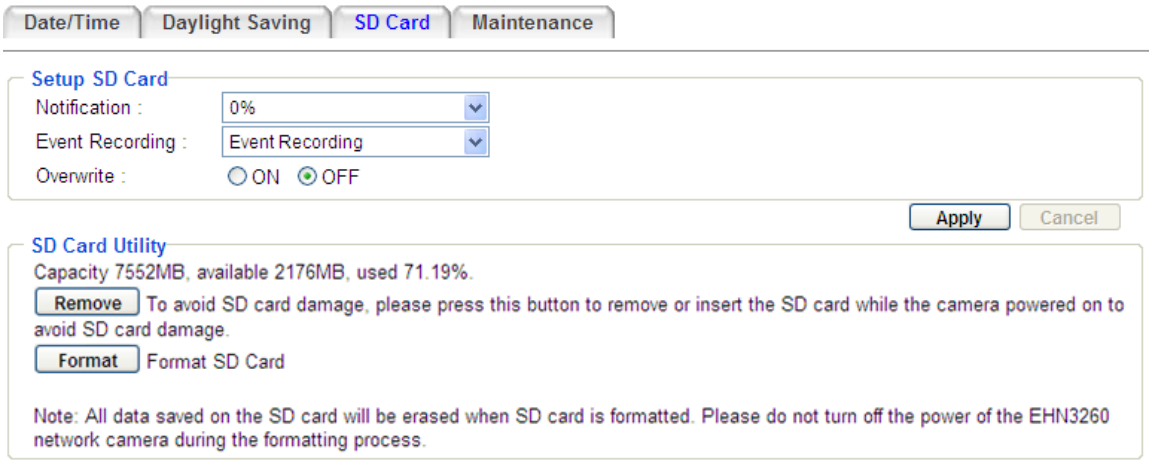
7.8.2 Daylight Saving

Click **Enable Daylight Saving** to enable this schedule, and select the dates when the region's daylight saving period begins and ends. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.


Date/Time
Daylight Saving
SD Card
Maintenance
Set Daylight Saving
Enable Daylight Saving
Start : LAST Sunday in March Switch from : 03 :00 To 02 :00
End : LAST Sunday in November Switch from : 02 :00 To 03 :00
Apply
Cancel

7.8.3 SD Card

Use this page to prepare the system for safely removing the SD Card from its slot.


Date/Time
Daylight Saving
SD Card
Maintenance
Setup SD Card
Notification : 0%
Event Recording : Event Recording
Overwrite : ON OFF
Apply
Cancel
SD Card Utility
Capacity 7552MB, available 2176MB, used 71.19%.
Remove To avoid SD card damage, please press this button to remove or insert the SD card while the camera powered on to avoid SD card damage.
Format Format SD Card
Note: All data saved on the SD card will be erased when SD card is formatted. Please do not turn off the power of the EHN3260 network camera during the formatting process.

【Setup SD Card】

Notification: Select the percentage of storage space that should be left on the card before the camera notifies you of the impending storage shortage or overwrite.

Event Recording: Select if you want Event Recording only, FTP Backup only, or both.

Overwrite: Click **ON** if you want the card to start writing over recorded footage when its memory is full. Click **OFF** if you want the card to stop recording new footage when its memory is full.

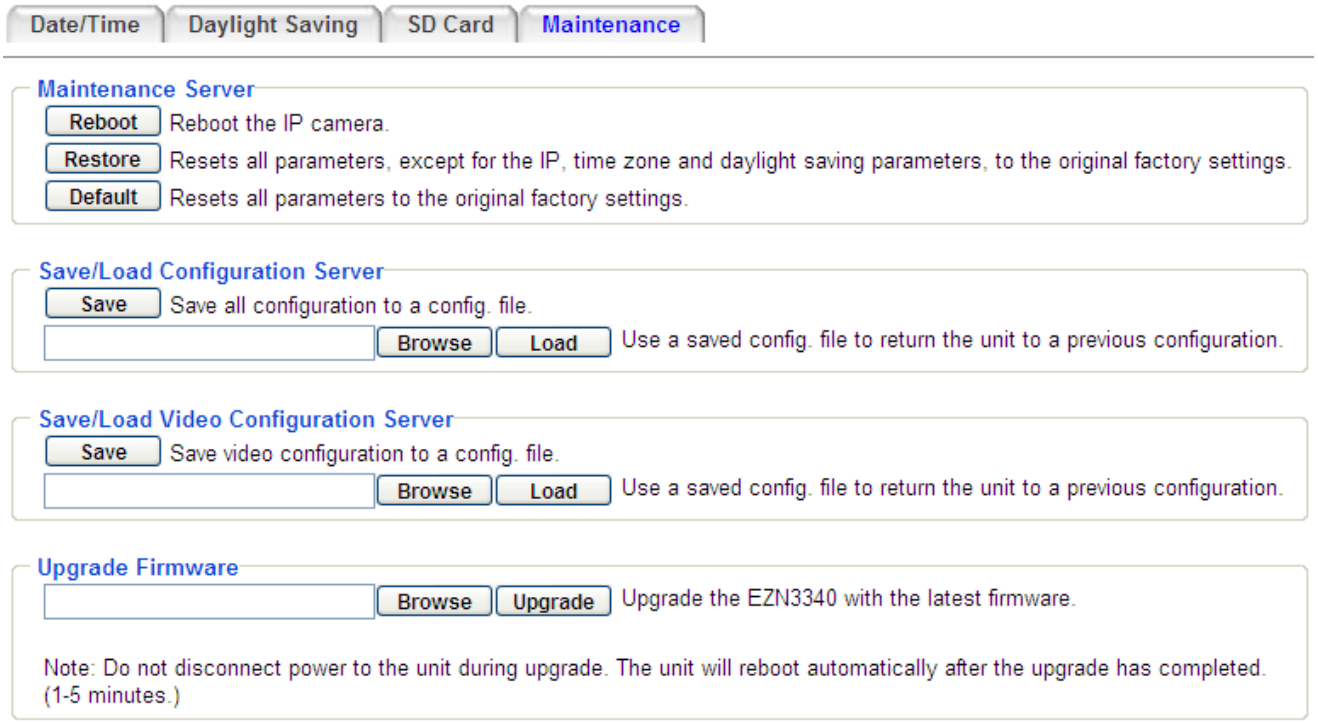
【SD Card Utility】

Capacity: This shows you how much card memory has been used and how much memory capacity remains on the card.

Remove: Click this button before removing the card from the system.

Format: Click this button to format the card. All data saved on the SD card will be removed if the card is formatted.

7.8.4 Maintenance


Date/Time
Daylight Saving
SD Card
Maintenance
Maintenance Server
Reboot
Reboot the IP camera.
Restore
Resets all parameters, except for the IP, time zone and daylight saving parameters, to the original factory settings.
Default
Resets all parameters to the original factory settings.
Save/Load Configuration Server
Save
Save all configuration to a config. file.
Browse
Load
Use a saved config. file to return the unit to a previous configuration.
Save/Load Video Configuration Server
Save
Save video configuration to a config. file.
Browse
Load
Use a saved config. file to return the unit to a previous configuration.
Upgrade Firmware
Browse
Upgrade
Upgrade the EZN3340 with the latest firmware.
Note: Do not disconnect power to the unit during upgrade. The unit will reboot automatically after the upgrade has completed. (1-5 minutes.)

【Maintenance Server】

Reboot: Click this button to reboot the unit without changing any of the settings. Use this function if the unit is not behaving as expected.

Restore: Click this button to restart and reset most of the current settings to their factory default values. The only settings that will not be changed to default are:

- IP settings
- DDNS settings

Default: The **Default** button should be used with caution. Pressing this button will return all of the camera's settings, including the IP address, to the factory default values. The camera will then have to be reconfigured.

【Save/Load Configuration Server】

Save: To make a backup file of the machine's current configurations, press **Save** to save all the configurations to a config. file. This will enable the user to reload these configuration settings if the settings are changed and there is unexpected behavior.

Load: To load a previously saved configuration, press the **Browse** button to locate the saved config. file (see above) and then click the **Load** button. The system's settings will be restored to the saved configuration.

【Save/Load Video Configuration Server】

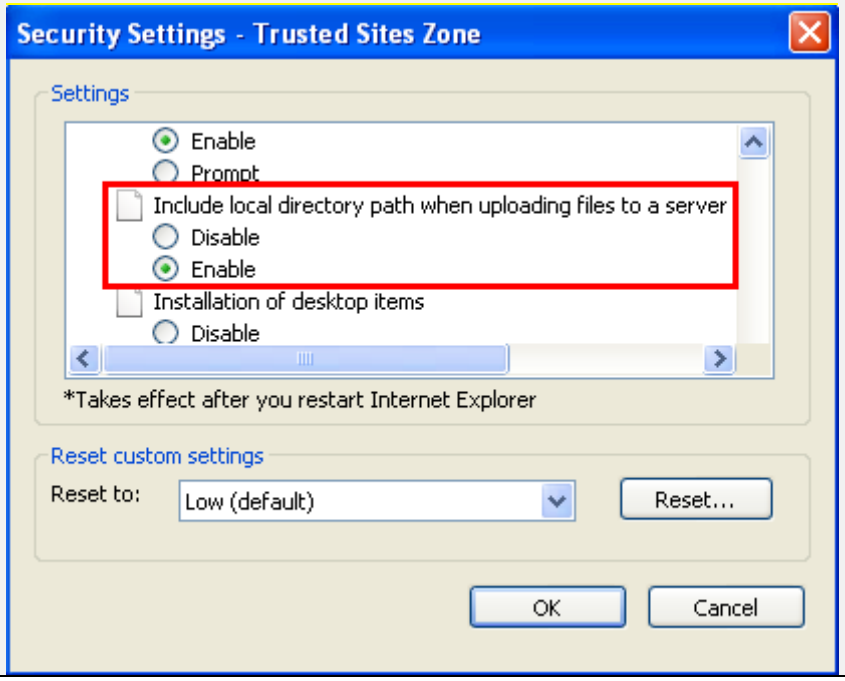
Save: To make a backup file of the machine's video configurations, press **Save** to save the video configurations to a config. file. This will enable the user to reload these configuration settings if the settings are changed and there is unexpected behavior.

Load: To load a previously saved video configuration, press the **Browse** button to locate the saved config. file (see above) and then click the **Load** button. The system's settings will be restored to the saved video configuration.

【Upgrade Firmware】 Click the **Browse** button to find a previously prepared firmware upgrade file. Click **Upgrade** to install the new firmware.

Note:

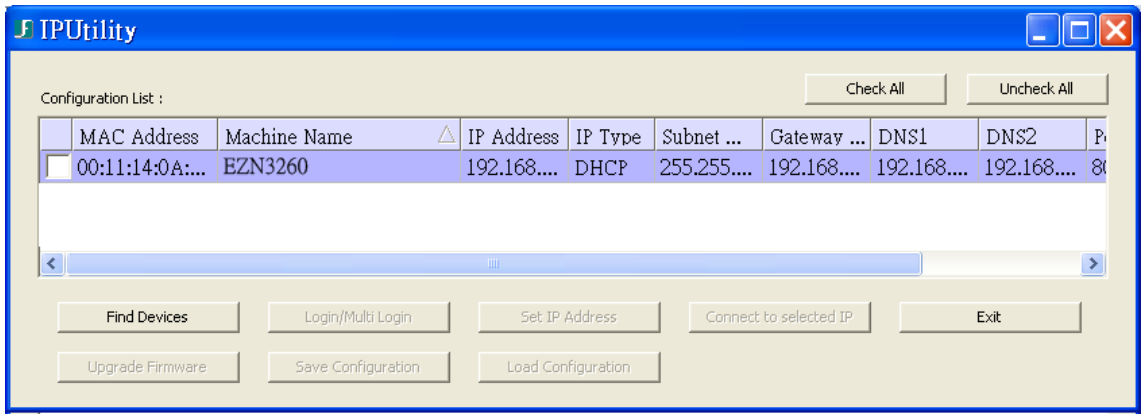
1. Do not disconnect power to the unit during the upgrade sequence. The unit will reboot automatically after the upgrade has completed (1-5 minutes).
2. During the upgrade process, all event recording actions will be stopped. Event recording actions will resume after the camera is rebooted.
3. If the "*File Error, Please re-login!!*" warning message appears when upgrading the firmware, please try the following instructions:
   a. Go to Internet Explorer > Tools > Internet Option > Security > Custom.
   b. Find and enable the **Include local directory path when uploading files to a server.**



8. Upgrading Firmware Using IP Utility

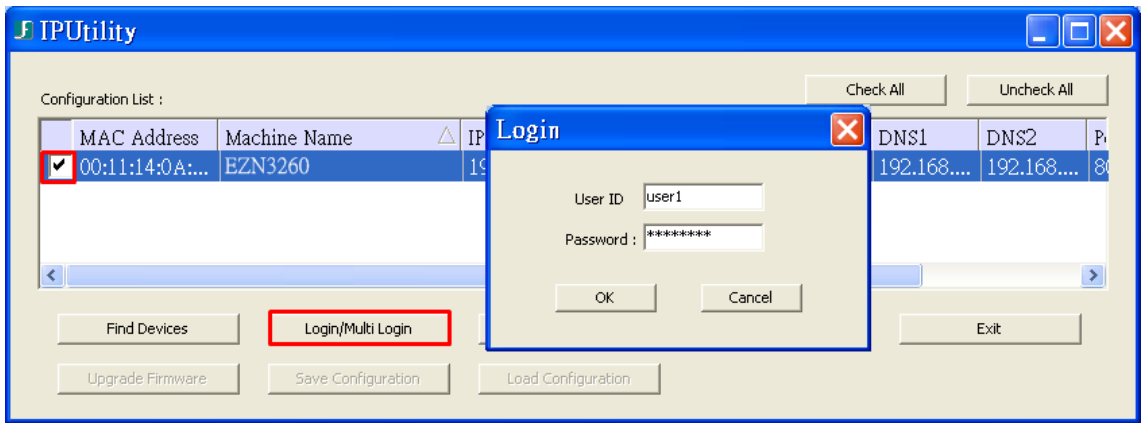
You can upgrade the Firmware using the **IP Utility** software included in the software CD.

1. Install and then start the **IP Utility** . The following dialog box appears.



2. IPU will automatically search the cameras connected in the LAN. The default network values of the cameras will be displayed. By default, the network protocol of the camera is **DHCP.**

3. Select a camera and then click **Login/Multi Login** to log in the camera.

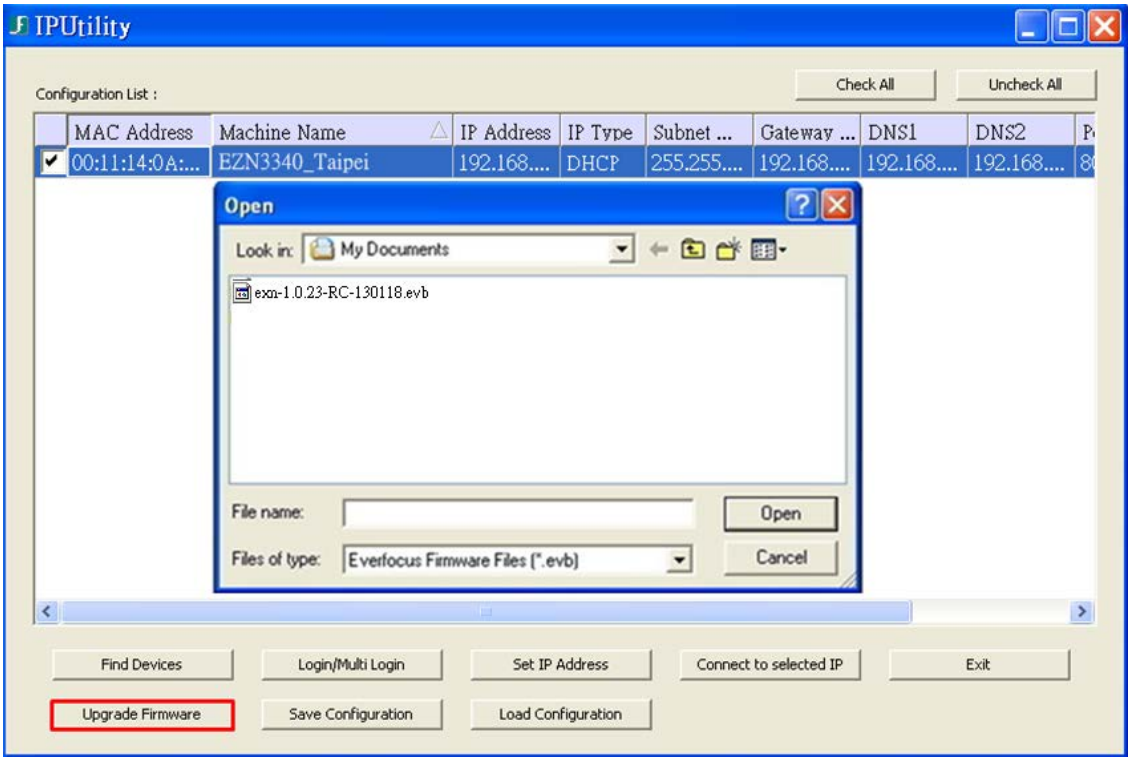


4. Type the user ID and password. Click **OK**.

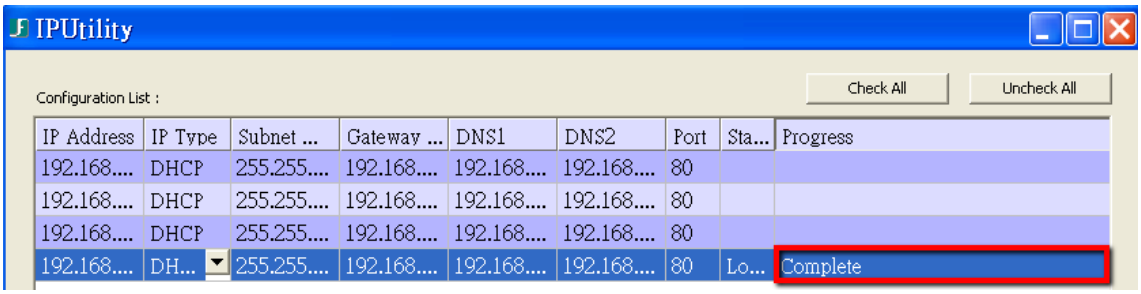
Note:

1. The default user ID is **user1** and the default password is **11111111**.
2. If you select more than one camera that has the same user ID / password, you will be able to log in several cameras at once.

5. Check the box to select the camera and then click **Upgrade Firmware**. A browsing window appears.



6. Select the **firmware file (.evb)** and then click **Open**. The IP Utility will automatically upgrade the firmware.



The camera will reboot once the update is complete. Click **Find Devices**, the new firmware version should be displayed in the last part of the Machine Name.

9. Specifications

Model		EZN3160	EZN3260	EZN3340
Camera				
Image Sensor		1/3" Panasonic CMOS	1/3" Panasonic CMOS	1/2.8" Sony CMOS
Megapixel		1.3 MP	2 MP	3 MP
Min. Illumination		Color: 0.1 lux at F1.3 B/W: 0.02 lux at F1.3 IR LED on: 0 lux at F1.3		
Electronic Shutter		8.5 ~ 1/60,000 sec.	2 ~ 1/50,000 sec.	1 ~ 1/10,000 sec.
Scanning System		NTSC / PAL		
WDR		Yes	Yes	No
Digital Zoom		10x		
BLC		Yes		
Gain Control		Yes		
White Balance		Yes		
Lens				
Lens Type		Varifocal		
Focal Lens		3 ~ 10 mm		
Aperture Ratio		F1.3 ~ 360C		
Day / Night		Yes (with removable IR-cut filter)		
Angle of View	**Horizontal**	Wide 100° / Tele 27°		
	Vertical	Wide 73° / Tele 20°		
IR Distance		40 m / 131 ft		
IR LED Quantity		44		
Video				
Video Compression		H.264 and MJPEG		
Resolution	**NTSC**	2048 x 1536, 1920 x 1200 (for EZN3340 only) 1920 x 1080 (for EZN3260 / 3340 only) 1280 x 1024, 1280 x 720, 1024 x 768, 720 x 480, 704 x 480, 640 x 480, 352 x 240, 320 x 240, 160 x 120		
	PAL	2048 x 1536, 1920 x 1200 (for EZN3340 only) 1920 x 1080 (for EZN3260 / 3340 only) 1280 x 1024, 1280 x 720, 1024 x 768, 720 x 576, 704 x 576, 640 x 480, 352 x 288, 320 x 288, 160 x 120		
Frame Rate		30 fps at 1280 x 1024	30 fps at 1920 x 1080	15 fps at 2048 x 1536

Audio				
Audio Streaming		Two-way audio		
Audio Compression		G.711		
Network				
Interface		10 / 100 Base-T Ethernet, LAN / PoE Cable		
Supported Protocols		TCP/IP, IPV6, UDP, ICMP, DHCP, NTP, DNS, DDNS, SMTP, SNMP, FTP, HTTP, HTTPs, PPPoE, UPnP, Bonjour, RTP, RTSP, RTCP, IGMP, ARP, ONVIF, PSIA		
Mechanical				
Memory Card		One micro SD / SDHC card slot		
Camera Angle Adjustment	**Pan**	360°		
	Tilt	90°		
	Rotate	360°		
Cables	**Alarm In/Out**	4-Pin terminal block		
	Audio Input	3.5mm stereo socket (pink)		
	Audio Output	speaker (green)		
	Power	12 VDC input		
	LAN / PoE	Connects to a 10 / 100 Base-T Ethernet or PoE		
General				
Power Source		12 VDC / PoE (IEEE802.3af)		
Power Consumption (IR LEDs On)		9W (12 VDC) 12.25W (PoE)	9W (12 VDC) 12.85W (PoE)	8W (12 VDC) 11.5W (PoE)
Operating Temperature		-40°C ~ 55°C / -40°F ~ 131°F (12 VDC) -20°C ~ 55°C / -4°F ~ 131°F (PoE)		
Humidity		20% ~ 80% (no condensation)		
Safety		CE, FCC		
Weather Resistant		IP66-rated		
Dimensions (L x W x H)		359.9 x 95.5 x 95.5 mm / 14.17 x 3.76 x 3.76 in		
Weight		1.62 kg / 3.57 lbs		
Language		Czech, Dutch, English, French, German, Japanese, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Traditional Chinese		

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In the European Union there are separate collection systems for used electrical and electronic product.
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Bitte entsorgen Sie dieses Gerät bei Ihrer örtlichen kommunalen Sammelstelle oder im Recycling Centre.
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